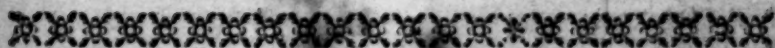


A N
E S S A Y
U P O N
P L A N T E R S H I P.

— *Si quid novisti rectius istis,
Candidus imperti; si non, his utere mecum.* HOR.



[Price Eighteen-Pence.]



AN
ESSAY
UPON
PLANTERSHIP,

HUMBLY INSCRIBED

To his EXCELLENCY
GEORGE THOMAS, Esq;

Chief Governor of All the LEEWARD ISLANDS,

As a Monument to ANTIENT FRIENDSHIP.

Ære perennius esto!

The Fifth Edition, [with many Additions; and a
PREFACE upon the SLAVERY of NEGROES in
the *British Colonies.*

By SAMUEL MARTIN, Senior, Esq;

L O N D O N:

Printed for T. CADELL, in the STRAND.

MDCCLXXIII.

M O 4 U

PLANTERSHIP

1945

To His Excellency

GEORGE THOMAS, JR.

Chief Governor of All the LEPARD ISLANDS.

UNIVERSITY OF CHICAGO

1.20. 1917-18 5.18



BY SAMUEL MARTIN, Senior, Esq.

E O W D O N

U.S. DEPARTMENT OF AGRICULTURE

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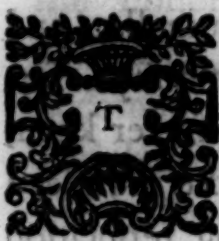
DEDICATION

TO

All the PLANTERS

OF THE

BRITISH SUGAR-COLONIES.



HIS little tract, first written for the instruction of a young planter, is now presented to the public in hopes of doing more general good, and humbly dedicated to you, Gentlemen, as to the most proper patrons, without any expectation of other reward, than that of a candid perusal. If the precepts here inculcated are

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consonant to plain reason, and confirmed by experience, the Proposer will think his pains amply rewarded, by promoting your interest with that of the public: if otherwise, let this be rejected, and a better scheme of plantership propounded for the general practice. But even in that case, I shall have a right to claim the merit of being a whetstone to sharpen the ingenuity of other men, in the service of their country: or, as a witty old poet expresses it much better than I can translate,

——— *Fungar vice cotis, acutum*
Reddere quæ ferrum valet, exors ipsa secandi.

The Author confesses his want of acuteness to treat well a subject, which hath employed the pen of Virgil, Columella, and several other great Genii of antiquity; for, being grown old, his faculties, if ever keen, have lost much of their edge: he is indeed passed the ambition of acquiring reputation by authorship: for, if that had been his view, he could not have paid his court to Fame in this remote corner of the world, where she can never have the power of conferring dignity, or of sounding her golden trumpet:

trumpet : nor would he have chosen a topic of which the meanest overseer thinks himself an admirable judge ; because well aware that it is the hardest task imaginable to write with applause upon so trite a subject. This, Gentlemen, you will see, he has treated with the utmost plainness, aiming much more at perspicuity, than ornament. Brilliant metaphors and other glittering embellishments are proper decorations for works of Fancy, which never charms the modern critic so much as when dress'd like a fashionable lady, in all the splendor of wit, beauty, and other finery of ribbons, laces, bugles, fringes, flounces, and flowers. But such gaiety would ill-become the gravity of that venerable matron Agriculture, whom I have the honor of introducing to your favor. Her dress must be simple and unaffected, becoming those reverend grey hairs with which old age has adorned her head : but old as she is, her aspect has more winning graces than dress and beauty can bestow ; even such as virtue, temperance, and exercise usually confer upon solid sense, and mature judgement. By these charms Agriculture captivated all the renowned legislators,

patriots, soldiers, orators, and poets of antiquity, who gladly devoted their hours of retirement to this admirable Instructress, and her industrious sister Experience.

In those days when Rome was in its meridian of virtue and glory, it was common to see a dictator resigning, with pleasure, all the pomp of a triumph to till his little farm; as if Agriculture was the only genuine parent of ease, innocence, temperance, health, wisdom and fortitude. Certain it is however that the best plowmen were the bravest generals, and the wisest politicians of the Roman commonwealth; as if the same qualifications were equally requisite to form those very different characters. This I confess seems a paradox at first view; but upon closer examination will appear not less true of a good planter, than it was formerly of a Roman husbandman.

A liberal education is undoubtedly the principal ingredient necessary to form a good planter, who ought at least to know the rudiments of all the sciences, if he attains not the mastery of them: but to be more precise, let us take a short view of the proper qualifications of a planter in his public

lic and private capacity. If he is born to a large estate, or has acquired it by industry, he must expect to be a member of the legislature, and of the military order also. In the former character he must understand the whole science of good policy, founded upon the nature and ends of government in general; and in particular upon the constitution of Britain his mother country, and of the Island which he inhabits. The true interest of *that* will be promoted most effectually, by the institution of good laws for the encouragement of credit and commerce, to the advantage of fair traders, and to the utter extirpation of all clandestine commerce, *that canker at the heart of civil society*; but more especially by such Laws as will effectually secure the *safety* of his Country, both from within, and from without. To that end the wise policy of Barbadoes with respect to *Settlers*, is most worthy of imitation by the other British Sugar-Colonies: for, servants, as well artificers as others, at the expiration of their servitude, are there made Landholders of three, four, or five acres, and by that means become *permanently interested* in the preservation of the

the Island. But the servants act of this, seemingly intended for increasing the number of our inhabitants, is nothing better than a mere *mode* of raising part of the annual tax. At Jamaica the law is much the same: but it is hard to conceive how the patriots of that Island can justify their tame acquiescence under such a fruitless law: and it is yet more wonderful that they should submit to a shameful *monopoly* † of great tracts of land so inconsistent with all views to the populousness of a country, subject both by its great extent, and high mountains, to *intestine wars* not possible to be suppressed by *a few*; and situated so near *two* powerful Nations; the one aiming at universal dominion, and the other peculiarly ambitious to recover an antient possession taken from them by conquest. If those Gentlemen who grudge a small portion of their lands for poor settlers, would compute how far preferable a *less possession is with certainty*, to a *greater without it*, they could

† If the Legislature of Jamaica would raise a great part of their annual tax upon *uncultivated lands*, the engrossers must be obliged to sell cheap, or suffer them to be sold by the Receiver General under the sanction of a law, giving a good title to all buyers.

not be so blind to their own real interest as to bar the door against all kind of Settlers both rich and poor: especially when it is considered, that by an higher culture, a *less* quantity of land will yield *much more* profit, than a very large tract ill cultivated.

The true patriot therefore will not grudge a small portion of his lands to render his country populous, as well knowing that the very existence of it depends upon the number and good discipline of its inhabitants: for, by that means all attempts of insurrection will be prevented. It is true, that an insurrection never can be successful in these Islands, while Britain has such ample power to suppress, and take vengeance upon rebels; yet the very attempt may be the cause of much bloodshed, and the massacre of the most brave men, who are ever foremost in danger for the public defence. But a numerous body of white men interested in the soil, and well disciplined, not only stifle such rebellious machinations in the birth; but are able and ready to repel any invasion by our most powerful neighbours: and if the bulk of our people consists (as it ought to do)

do) of Artizans, *workmanship will become cheaper*, and *they themselves* grow much *richer*, by having *more employment*; for then every man, who can pay, will be glad to have all the conveniencies, and even the elegancies of life about him. The wise Legislator will surely consider these points very maturely, and provide timely for all the exigencies of his country: for, as *precaution* is the eldest son of Wisdom, by Valor; so *Heedlessness* is the child of Folly, begotten by Stupidity. The former guards against every future evil, and when not to be prevented, is most resolute in repelling public injuries: but the latter, ever laughing at distant dangers, is the first to fly like a coward, when they are present.

In the capacity of a soldier the accomplished planter must be well read in the history of former wars; and become intimately acquainted with all the famous Generals of antiquity, as to their characters, genius, discipline, stratagems, and achievements. Among the maxims of the best and wisest of them, he will find, that the *meanest enemy is not to be despised*, and the *greatest* may be subdued

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subdued by superior *Generalship* *. Instead of being inactive in times of peace, the good soldier will think it the *most proper season* for training his men without interruption to good discipline: for, by that only, a small body will overcome a numerous army without it; as Alexander's few Veterans did the innumerable hosts of Persia: for, every trained soldier well knowing and depending upon the support of his fellows, acts with confidence; and irresistibly too, by the force of the whole body united in one compact Phalanx.

As a magistrate he must be acquainted with the common forms of justice, and our statute-laws. In his private character he must be an adept in figures, and in all the arts of oeconomy; something of an architect, and well skilled in mechanics; because there is in every plantation a variety of buildings and machinery, upon the right contrivance and use of which, much of the planter's success depends. He must also be an

* Our justly celebrated Hero, the late Duke of Marlborough, proved the advantage of superior *Generalship*, by many signal victories over the armies of France, which always were more numerous, and probably as well disciplined.

an expert sugar-boiler, and distiller, if he expects to make the most of his estate. It is obvious of what benefit a little physical skill will be to his sick negroes; at least enough to cure such † acute diseases as are incident to the country he inhabits; together with proper diet, and kitchen-physic, which are generally more efficacious. But every planter should be more particularly a very skilful husbandman; because upon the right culture of his soil depends absolutely the *quantity*, and in a great measure the *quality* also of his produce.

It is very true, that much time and close application must be allowed for the acquisition of all these accomplishments: and every planter can afford it, when the cares of the day are over. But there still remains a more arduous task, to become a real practical philosopher by the conquest, or government

† Acute diseases are often so sudden and violent in these climates, that all remedies come too late, before a skilful physician can be called: in pleurifies and inflammatory fevers the celebrated Dr. James's powders have effected wonderful cures, well worthy the notice of our practitioners: as the famous Dr. Ward's excellent medicines have done in chronical diseases. In many of those cases, both tar-water and lime-water are of admirable use.

ment of all the human passions: for, if these are not under absolute subjection to right reason; how can the planter exert all the social virtues upon so many and great occasions, as must every day call them forth? Or how can he govern some hundreds of his dependents with ease to himself, and happiness to them, without all the influences of a good example? White servants as well as negroes are the planter's dependents: and if according to the principles of humanity, the latter ought to be treated with great kindness, how much more is it due to the former, who are directors of the others labors, and stand in a nearer relation to us? Upon a generous treatment of them therefore much of the planter's prosperity will depend: for, gratitude is the strongest obligation upon honest minds to diligence, and diligence is ever most active, when it runs hand in hand with content, good humor, and chearfulness. Justice, temperance, patience, and fortitude, tho' cardinal virtues of the highest quality, must be the planter's constant familiars, ever ready to do *right* to those who suffer *wrong*; to exhibit a life of sobriety, chastity, and beneficence, as a pattern

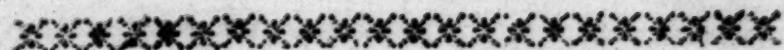
tern to be imitated by all his family; to bear patiently the vulgar weakneſſes of frail human nature; and even the perverſeneſs of thoſe under his charge; to ſuppreſs wickedneſs by ſuitable puniſhments, and to encourage goodneſs with generoſity; and after all, to bear proſperity, or adverſe events, with equanimity, and a becoming fortitude. Every ſocial and private virtue muſt therefore enter into the compoſition of a good planter, who aſpires to act his part well, on this ſtage of life, and to make his exit with ſelf-approbation, and univerſal applauſe.

That every planter in general, and my own countrymen in particular, may arrive at that honor and felicity, is the principal deſign of this eſſay, and the ardent deſire of,

GENTLEMEN,

Your faithful Servant,

S. M.



A
P R E F A C E
UPON THE
SLAVERY of NEGROES,
IN THE
British Colonies.

Shewing, that they are much happier than in
their Native Country, much happier than the
Subjects of Arbitrary Governments, and at
least as happy as the Labourers of Britain.



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22 JULY 1860



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To the Author of an ESSAY
upon PLANTERSHIP.

S I R,

HEARING that a NEW EDITION of the ESSAY upon PLANTERSHIP is intended, I take leave to send you a Preface, not unsuitable to the subject, but necessary at this time, to put an end to the many publications upon The Freedom of Negroes in the Colonies, by Writers, who are either absolutely ignorant, or ill-informed of the true state of Africans in their native country, or in our British Colonies.

Particular notice has not been taken, for brevity's sake, of the benefits arising to Britain from the Africans, in the consumption of India goods, and British manufactures, such as Brass Pans, Fire-Arms, Gun-powder, Lead, &c. for which we receive Gold Dust, Ivory, Dye-Woods, &c. in return.

I am, S I R,

Your Humble Servant,

BRITANNICUS.

To the Author of an ESSAY
upon PLANTERSHIP

21 R

THE KING has a New Edition of
the ESSAY upon PLANTERSHIP is
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I am, Sir,

Your humble Servant,

BRITANNICK

A

P R E F A C E, &c.

MANY publications have lately appeared upon this subject, by writers who are little acquainted with the Slavery of Negroes in their own country, or in our colonies. There are, indeed, very few authentic histories of the interior parts of Africa, either geographical or political. The best I have seen was written by Mr. Snelgrove, who had an accidental opportunity of seeing the country about 40 or 50 miles from the sea coast. He tells us of

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such scenes of horror and barbarity, practised by the king of Dormè upon his prisoners, the Whidars, as are too shocking to human nature to be repeated. This despotic monarch invaded the country lying between him, and the sea coasts, purely to have a port of commerce ; from whence he had been informed a great profit might accrue.

This invasion was carried on with amazing success : for the Whidars being intimidated by the fear of being eaten by the Dormies, (who feasted upon the flesh of their captives) that they made very little resistance ; trusting to their Gods, the *Snakes*, for their protection. The consequence of which was, the whole country stunk of the carnages made by the Dormies ; and many of the prisoners were sacrificed in cold blood, by the king of Dormè, their heads devoted to the king, their blood to their gods, and the flesh of their bodies to be

be eaten. Of all this Mr. Snelgrove was an eye-witness ; and, purchasing a cargo of these miserable wretches, saved them from the destined slaughter, or abject slavery to their fellow barbarians. In like manner, by the best information we are told that all the kingdoms of Africa are slaves, from the highest to the lowest, to the arbitrary power of lawless tyrants, who have the lives and properties of their subjects absolutely at their disposal. Nay further, that the principal and richest men of these countries, have the same power over their slaves and domestics, their wives and children, who are sold by the husbands and fathers to the traders of all nations upon the sea coasts. What shocking instances of the extinction even of nature's instincts, in the want of parental affection ! Yet for the pride of state, it is well known that when any of their children die a natural death, the *attendants* are sacrificed, that is,

burnt

burnt alive to be their attendants in the other world.

I know a gentleman of our colonies, who lost a child to whom he had given a little Negro girl for an attendant, who upon the death of her mistress, fled away, and hid herself among the sugar canes, till she was almost starved; and when taken, she confessed it was through fear of being burnt. This little Negroe was (if my memory fails not) of the kingdom of Congo. If this be the case of Africans, how can the writers for their liberty, call it the natural right of their own country?

Some of our lecturers, both English and Scotch, upon the laws of nature, delight much in displaying their eloquence, and venting their spleen, on the abuse of our colonists, concerning whom (from any good authority) they seem to be totally ignorant.

But

But for their better information, and of all others unacquainted with the true state of the question, I shall let them know that the purchase of these Africans to be labourers in our colonies is really a redemption of them from the most cruel slavery to a milder and more comfortable state of life than in their own country, at the same time it weans them from the vilest idolatry of *Snakes* and other reptiles, it removes them from arbitrary power and barbarity, to live under just and wholesome laws, by which their lives and properties are secured from murder, rapine, or theft ; and these crimes punished by the same ; only with less rigour than in this country ; for such thefts as would bring criminals to the gallows here, are frequently punished there with only a few stripes.

Those orators and advocates for the liberty of Negroes in our colonies, may be
assured

assured from undoubted testimony, that they live there more comfortably, and in much less indigence than the poor subjects of any arbitrary monarchy in Europe; for they are liable to no taxes, nor are ever compelled to become foldiers and seamen, by being torn from their families to serve in the armies or navies, and leaving their wives and children to starve.

On the contrary, the Negroes in our colonies are not only regularly fed by their owners throughout the year, at a very great expence, but have cloathing, warm houses, and spots of land, in which they produce fruits, roots, pulse, and vegetables, which they sell or apply to their own uses, as they please; besides, they enjoy the liberty of raising hogs, and feathered stock, which they sell or eat at their pleasure. I know some Planters Negroes, who sell five or six hundred pounds worth of pork every year, (besides regaling themselves with part of it)

for

for which their owners, as well as other people, pay them the market price.

Let those orators, or advocates for the liberty of the Negroes in our colonies, look round all the arbitrary governments of Europe, and see whether the common people of their subjects live half so happily and comfortably as our Colony-Negroes. Let them look into Ireland, among the common people, where there are no parish taxes, nor any other support for the sick and maimed, but by private charities, and importunate beggary. Nay, let us enquire into the state of our labourers in husbandry, even in this our opulent free country. Are they not slaves to necessity? the most cruel of all Egyptian task masters; who makes no abatement for sickness or other accidents, which disable the husband and father of a numerous offspring, from supplying their wants; save the poor pittance allowed by the parish, very unequal to the occasion

sion, and distributed by those who have no private *interest* to serve, and perhaps but little feeling for their poor fellow creatures; whose never-ending labours (much greater than those of our Colony Negroes) continue with life and ability. Is this a life so comfortable as those enjoy? yet these are called the sons of liberty, who really are the slaves of *necessity*. What is their great boast of liberty, but that of changing their employer? but that can neither mitigate their labours, nor increase their wages; and therefore cannot add any comfort to their existence.

On the other hand, the labourers of our Colonies have employers, who are not only equally bound by the laws of humanity, as other British subjects, to a tender care of their fellow creatures; but it is also their self-interest (the strongest incitement to human conduct) to preserve them in life and health; and, in case of their death, the
same

same care extends to the support of their children, who are really maintained at a great expence to their owners, till they arrive at maturity of age for labour. Can the poor sons of British liberty boast of all these advantages? the most zealous enthusiasts for the freedom of negroes must answer, No; if they can be convinced by facts, well-attested facts, by all who have seen, and considered the present state of our colonies.

How comes it to pass that these orators and writers for liberty, do not argue for that of our seamen and soldiers who are evidently in a state of bondage? Why should not our armies be disbanded, our navy burnt, and the seamen set at full liberty? their answer is, because the necessity of *discipline* requires that both soldiers and seamen must submit to such slavery for the security and protection of our country. Is it so? and does not the same necessity require African slaves for the culture of our

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Colonies, while no other labourers can be found? The necessity is equal in both cases; but the discipline is not, nor need be, so severe. Were seamen and soldiers set free from discipline, and left at large, our roads would abound with highwaymen and footpads, and our cities and villages with shop-lifters and house-breakers.— These would be the blessings of such a manumission.

Let us now consider what would be the consequences of the like practice with respect to the Negroes of our Colonies. Would not the same effects follow the same causes? and could those people be happier under the slavery of *necessity*, than under masters bound both by the laws of humanity and *self-interest*, to protect, feed, and cloath them? Then to Britain, as a trading nation, the best branch of its commerce must be lost, by the desertion of those colonies, which produce sugar, rice,
and

and tobacco. Productions not interfering with those of the Mother Country, and which contribute immense sums of money to the revenue of this kingdom. This may be exemplified in the produce of sugar in the Leeward Islands, which pays four and an half per cent. upon the spot, besides the duty here. Thus a planter pays upwards of four pounds sterling to the king, for every hoghead of sugar imported into Britain; which, at a medium, upon a plantation producing two hundred hogheads per annum, pays more tax than a landed estate in England of four thousand pounds per annum, if taxed according to the real rental, besides the four and an half per cent. above-mentioned: and yet the planter makes not more *communibus annis* than six per cent. allowing proper deductions for accidental fires, to which sugar-canes are liable; for hurricanes and severe droughts, natural to hot countries. Thus it happens

that in some such years, a plantation whose capital stock amounts to more than fifty thousand pounds sterling, will hardly pay its necessary charges; for the Negroes must be fed and cloathed, though the owner runs in debt for their subsistence.

It is well known to all the commercial world, that the colonies are much the best branch of trade belonging to this kingdom, not only because the productions of sugar, tobacco, rice, and indigo, do not interfere with the produce of the Mother Country; but because they take off more of its manufactures than any, if not all, the other branches of British commerce.

But the trade of our Colonies has this peculiar advantage above all the branches of foreign commerce, that Britain may enjoy it for a perpetuity. All foreign trade may be prohibited, or loaded with duties amounting to a prohibition: but no foreign
power

power can affect our own Colonies, but Britain may enjoy that trade for ever, with proper care, protection and encouragement.

Even those of our Colonies which produce not sugar, tobacco, rice, or indigo, and consequently add little to the revenue of Britain; yet they support a large navigation, and, being cold countries, take off abundance of our woollen and other manufactures, and supply our people in deficient harvests with bread and rice.

All foreign nations will rejoice at the destruction of our Colonies by the extinction of the African trade, as conducing to promote the interest of their own. One would think some French or Dutch writers had been lately employed to write on this subject. But the wisdom of parliament has for many years encouraged and promoted it, by frequent supplies to support our forts upon that coast; and doubtless will continue to main-

maintain a trade so essentially necessary to the support of our Colonies, from whence is derived not only great profits to trade, and the British revenue, but also a very great navigation, which is the natural strength of our country. If therefore the writers who argue for the freedom of Negroes were successful ; all those advantages must be lost, and Britain itself become a poor, wretched, defenceless country, and very soon a province to France : and thus, by setting free the Africans, Britons become the more wretched slaves to arbitrary power.

These are evidently the natural consequences, deducible from facts. May heaven avert such fatal consequences ; and though there is little reason to believe that such enthusiastic writers for the freedom of Negroes can produce such a fatal mischief ; yet they may inspire our Colony Negroes with endeavours to steal away from thence, in order to come into this land of liberty, though
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it be to starve, in vain hopes of washing the Blackamoor white. If not that effect, they may instil such enthusiastic notions of liberty, as may occasion revolutions in our colonies, and consequently the effusion of much blood. It is therefore humbly hoped the parliament will provide such remedies as may be adequate to the occasion, by expelling the Negroes now here, who are not made free by their owners, and by prohibiting the introduction of them in this kingdom for the future; and save the natural beauty of Britons from the Morisco tint; and remove the envy of our native servants, who have some reason to complain that the Negroes enjoy all the happiness of ease in domestic life, while many of those starve for want of places.



A N

ESSAY on PLANTERSHIP.

BY PLANTERSHIP I understand the art of managing a sugar-plantation to the best advantage; so as to make it produce the most, both in quantity and quality. To effect a design so comprehensive, it is necessary to understand every branch of the art precisely; to plan every scheme with mature premeditation; and to exercise all the arts of œconomy in the execution: for as a sugar-plantation is the most expensive kind of estate; so the clear profit of it will be more or less in proportion to the manager's frugality. It is therefore the duty of a good planter to inspect every part of his plantation with his own eyes; to place his provisions, stores, and utensils in regular order, and in safe repositories; that, by preserving them in perfection, all kinds of waste may be prevented.

But as negroes, cattle, mules, and horses are the *nerves* of a sugar-plantation, it is expedient to treat

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that

that subject with some accuracy; for the success of the whole consists chiefly in this, as in a well constructed machine, upon the energy and right disposition of the main springs, or primary parts.

First then, let us consider what is the right or rational method of treating negroes; for rational beings they are, and ought to be treated accordingly; that is, with humanity and benevolence, as our fellow creatures, created by the same Almighty hand, and under the same gracious providence, to whom the best and greatest of the human species owe their existence, and are accountable. The subordination of men to each other in society is essentially necessary to the good of the whole; and is therefore a just reason for the benevolence of superiors to their inferiors. The meanest individual has then an equal right to civil protection with the greatest, and to a share of what the earth produces, as the natural reward of his labor: The lowest condition is not a just ground for contempt or neglect, no more than the color of a man's complexion is for uncharitableness; and whatever Europeans may think of it, the distinction between the vulgar of the most free government and the negroes of our colonies is little more than *nominal*; for he that is forced to hard labor in support of life, is as much a *slave to necessity*, as negroes are to their owners. The only difference is, that the former may chuse his master; but it is out of his power generally to chuse a better: he that pays him a pittance for his labor, does his duty, and all that he owes; but still the daily labor proceeds, and necessity will make no abatement for sickness, or other accidental inabilities; and the tender mercies of parish-officers, like the miser's

ser's largesses, administer but little comfort to a sick man, and perhaps a numerous offspring. But negroes purchased by the British planters, are redeemed from absolute slavery to a degree of liberty, much greater than the subjects of absolute power in Europe: for they enjoy the privileges of written laws, by which their lives and little properties are secured; and being subject to such correction as children are to parents, or apprentices to masters, seldom receive more punishment for felonies; than criminals do in Britain for petty larcenies: for as it is the interest of every planter to preserve his negroes in health and strength; so, every act of cruelty is not less repugnant to the master's real profit, than it is contrary to the laws of humanity: and if a manager considers his own *ease*, and his employer's interest, (as he must do if he is an honest man) he will treat all negroes under his care with due benevolence; for good discipline is by no means inconsistent with humanity: on the contrary, it is evident from experience, that he who feeds his negroes well, proportioneth their labor to their age, sex, and strength *, and treats them with kindness and good nature, will reap a much larger product, and with infinitely more ease and self-satisfaction, than the most cruel Egyptian task-master, who starves his negroes, or chastises them with undue severity. Every man then who wishes to grow rich with ease, must be a good oeconomist; must feed his negroes with the most wholesome food, sufficient to preserve them in health and vigor. He must also treat them

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with

* Hoe-plowing or holing stiff land is an heavy labor that ought to be relaxed often by easier work, which by good contrivance may be done to equal benefit, and ought to be done.

with justice and tenderness; not suffering the least injury to be done by any one to another: for, tho' a master may, and ought to forgive small injuries to himself, it is not in his power consistently with justice, to forgive injuries done to another, without due compensation. In case of sickness, the good planter will exercise in person his utmost care and tenderness in the administration of proper physic, and food, with an unsparing hand: for, to be parsimonious in such cases, is both weak and wicked. Common experience points out the methods by which a planter may preserve his people in health and strength. Some of his most fruitful land should be allotted to each negro in proportion to his family, and a sufficient portion of time allowed for the cultivation of it; but because such allotment cannot in long droughts produce enough for his comfortable support, it is the incumbent duty of a good planter to have always his stores well filled with Guinea corn, yams, or eddas, besides potatoes growing in regular succession: for plenty begets cheerfulness of heart, as well as strength of body, by which more work is effected in a day by the same hands, than in a week when enervated by want and severity. Scanty meals of New England corn may sustain life; but it is our own produce only which can impart athletic vigor: and yet if the labor of producing our own provisions was fairly computed, and compared to the expence of purchasing that of North America, I dare affirm, the latter will be found as expensive, tho' much less wholesome and nutritious. It is therefore matter of just concern to see the cultivation of provisions so generally neglected in our colonies, where there is not wanting in any plantation some kind

kind of soil, adapted by nature, or improveable by art, to the production of some sort of provisions. This general neglect (if my opinion may be admitted) is one great cause of our general poverty: for, while the planter feeds his negroes scantily, or with unwholesome food, how can he expect much labor and plentiful crops? Such expectations are vain and fruitless! He therefore who will reap plentifully, must plant great abundance of provisions as well as sugar-canes: and it is nature's œconomy so to fructify the soil by the growth of yams, plantains*, and potatoes,

* Plantains are the principal support of all the negroes at Jamaica; and are also much cultivated, at great expence of manure, in Barbados: but ought not to be solely depended upon, in climates subject to hurricanes. A celebrated planter and oeconomist of that island, who raised an immense fortune from very small beginnings only by planting, affirmed, that he fed constantly at least 300 negroes out of 12 acres of plantains. How that excellent produce came to be so long neglected in this island, is hard to guess: but at present the neglect seems to be founded upon a vulgar error, that plantains cannot thrive in any other than low moist soils. In such places (no doubt) they flourish most luxuriantly: but yet they thrive and bear fruit abundantly on mountains, and in marshes; and in the driest black mold, upon marle or rocks, and even in sharp gravelly soils, as may be evinced by numberless instances. Besides the advantage of having a large product of our provision, independently of casual supplies, we may by that means prevent the monopoly of corn, and in some measure the constant drain of our current cash, which the New England traders now carry to St. Eustatius, for the purchase of French sugar, rum, molasses, and other foreign manufactures. A base, destructive trade, which (if not effectually prevented) will infallibly exalt the French islands upon the ruins of these colonies. This illicit trade is audaciously carried on in the face of the sun, by the most flagitious race of men; by parricides who stab their country to the heart, that they may suck their subsistence from its vital blood. Yet even these abandoned wretches have been able, with the help of thieves, pickpockets, and robbers, to cast a general odium upon the honest name of *informers*, purely to screen their wickedness from detection,

tatoes, as to yield better harvests of sugar by that very means, than can be produced by many other arts of cultivation: so bountiful is the Creator, to make that most for our interest, which is most our duty. However plenty of wholesome food may be conducive to health, there are also other means equally necessary to strength, and the longevity of negroes, well worth the planter's attention: and those are, to chuse airy, dry situations for their houses, and to observe frequently that they be kept clean, in good repair, and perfectly water-tight; for, nastiness, and the inclemencies of weather generate the most malignant diseases. If these houses are situated also in regular order, and at due distances, the spaces may at once prevent general devastations by fire, and furnish plenty of fruits, and pot-herbs, to please an unvitiated palate, and to purify the blood.

Thus then ought every planter to treat his negroes with tenderness † and generosity, that they may be induced to love, and obey him out of mere gratitude; and become real good beings by the imitation of his benevolence, justice, temperance, and chastity: for nothing influences the conduct of mankind so much as the example of superiors, who are always in view: and

detection, and condign punishment: but whatever they may say, whose tongues are no slander, the *informer* who brings smugglers to the bar of justice, is the best friend to his country; while those traitors to it should be scorned and despised as pirates upon the fair trader, and as the greatest pest to civil society; from whence they ought to be driven by the constant discouragement of every man pretending to common honesty.

† It is a general but a bad maxim, *to finish a piece of work, when it is begun*; for the alteration of weather, and the hardness of labor, must require changes and intermissions.

and therefore a good planter, for his own ease and happiness, will be careful of setting a good example, as the best means of propagating the gospel-morality. Having thus hinted the duties of a planter to his negroes, let the next care be of cattle, mules, and horses: for these creatures are next in degree valuable to their owner. The planters of Barbados (who are perhaps the most skilful of all others, and exact to a nicety in calculations of profit and loss) are, with respect to their cattle, the most remiss of any in all the islands; as if the carriage of canes to the mill, and of plantation-produce to the market, was not as essential as any other branch of plantership. At Barbados in particular, the care of these animals is of more importance, because the soil, worn out by long culture, cannot yield any produce without plenty of dung. Some planters are nevertheless so ingeniously thrifty, as to carry their canes upon negroes heads; not only degrading human nature to the toil of brutes, but acting in that respect diametrically opposite to their own apparent interest, which cannot be served more effectually, than by saving the labor of human hands in all cases where the labor of brutes can be substituted. To that end no means of preserving those creatures in health and strength, ought to be neglected.

The first care therefore is to provide plenty and variety of food. In crop-time profusion of cane-tops may be had for the labor of carriage; but will be more wholesome and nutritious if tedded like hay by the sun's heat, and sweated by laying them in heaps a few days before they are eaten. In this season of abundance, great ricks of cane-tops (the butt ends turned inwards) should be made in the most conveni-

ent corner of each field, to supply the want of pasturage, and other food : and these are very wholesome if chopped into small parts, and mixed sometimes with common salt, or sprinkled with melasses mixed with water : but yet the cattle require change of food to preserve them in strength, such as Guinea corn, and a variety of grafs, which every soil produces with a little care in moist weather. This variety is found necessary in all climates, and is the hind's constant practice in England, where good husbandry is crowned with most success.

But since that variety is not to be had during those severe droughts to which hot climates are liable, and much less in these small islands, which cannot furnish large tracts of meadow-lands for hay ; our only resource is to the fodder of cane-tops, or tedded Guinea corn-leaves, which from my own experience I can affirm to be very nutritious, and may be preserved in perfection for more than a whole year, provided the tops or Guinea corn are well tedded for three or four hot days as they lie spread in the field ; and then being tied into bundles or sheaves, must lie in the hot sun for three or four days more, when they may be fit to be put up into ricks. The best method of making them is in an oblong figure ; about thirty feet in length, and 16 or 18 feet wide ; 7 feet high at the sides, and from thence sloping like the roof of an house, the ridge of which must be thatched very carefully ; for the sides may be secured from wet by placing the bundles with the butts upwards towards the ridge, in courses, and lapping the upper over the lower course,

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The best method of forming those ricks, is to place the first course of bundles all over the base one way; the second course reversely; and so alternately till the rick be finished.

When cattle are to be fed with this excellent fodder, it must be observed to take down the bundles from the top, at † the west end of the rick, to the bottom; for all these ricks must stand east and west lengthwise, as well to secure them from being overturned by high winds, as for the convenience of preserving them from wet, which cannot be done when ricks are made round. By this husbandry an herd of cattle may be kept in strength, either in severe droughts, or in wet seasons, when grass is purgative: and thus the necessity, or expence of large pastures may be totally saved.

Tedding Guinea corn to make a kind of hay, has been mentioned, and will require a little explanation here. When Guinea corn is planted in May, and to be cut down in July, in order to bear seed that year; that cutting tedded properly will make an excellent hay, which cattle prefer to meadow-hay, as I have found by experience. In like manner, after Guinea corn has done bearing seed, the blades which shoot up, or after-crop, as it is called in England, will furnish a great abundance of that excellent kind of fodder, which will keep well in ricks for two or three years.

The next care of a planter is to provide *shade* for his cattle, either by trees where they are fed in the heat of the day, if his soil requires not dung; or by
building

† The hay-knife used in England for cutting hay, answers for cutting ricks of tops.

building a flat shade over the pen where cattle are confined for making it. That such shades are essentially necessary to the well-being of all animals in hot weather, is apparent to every common observer, who cannot fail of seeing each creature forsaking the most luxuriant pastures in the heat of the day, for the sake of shade; thus convincing the owners by instinctive argument, that shade is almost as necessary to the well-being of the brute creatures, as food. Notwithstanding that demonstration from the unerring course of nature, I am sorry to confess, that some men shut their eyes against this animadversion, and their own interest: for, throughout all our islands (except in a very few instances) these poor creatures are exposed to the scorching sun-beams without mercy. Such inhuman neglect is not always so much the effect of inattention, as of a mistaken notion, that shades are impedimental to the making of much dung; but a flat shade covered with cane trash, may be so made as to let rain pass thro' it, without admission of sun-beams. This will do for cattle; but mules, which are spirited creatures, and work themselves by draught into a foaming heat, should be put into a warm stable, until quite cool: for turning them loose to pasture, when so hot, is the cause of their destruction by the glanders.

If the care of providing shade for brute creatures is so much the duty and interest of their owners, how much more is it agreeable to the laws of humanity to provide shade for human creatures travelling upon the high roads in this hot climate? Nothing surely of so much beauty, is so little expence as planting coconut, or spreading timber-trees in avenues along the high

high ways, if each proprietor of the lands adjoining hath any taste of elegance, or feeling for other men: but both those kinds of trees will yield also great profit to the proprietor, by furnishing him with timber, when perhaps not otherwise to be had; or with delicious milk, fitted by nature to cool the effervescence of the blood in this hot region; and also to improve our spirits made from sugar to the delicacy and softness of arrack *. Coco-nut, and cabbage-trees are both very beautiful and shady, bearing round heads of great expansion, upon natural trunks, or pillars of elegant proportion, and of such an height as to furnish a large shade, with a free circulation of air equally refreshing to man and beast.

The common objection of injury to canes by the roots of such trees growing on their borders, is too mean to deserve an answer: but to gratify the muck-worm, let him dig a small trench between his canes and trees, which may intercept their roots, and oblige them to seek sustenance in the common road, and he will prevent the little expence to his purse, which he now saves from the sweat of travellers, by not planting trees. Let such a man consider, besides the benefits above suggested, that he will beautify his estate to the resemblance of a most sumptuous garden. And if this whole island, naturally diversified with numberless little hills and dales, were planted with avenues along the high roads, and the summit of every
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* Arrack, so called in East India, is a spirit made of sugar like rum, with this only difference, that the sap of the coco-nut-tree, called toddy, drawn off by cutting the fruit-branch, is part of the mixture to forward the fermentation, and answers the end of lees, as yeast or barm.

barren hill crowned with clumps of trees, it would be the most magnificent garden the world could ever boast of, since that of Eden: and probably that very beauty might not only render it more healthful to the inhabitants, by preserving them from fevers, kindled by the burning sun-beams; but also much more fruitful, by seasonable weather: for, as by cutting down all its woods, an hot country becomes more subject to excessive droughts, so by replanting it in the manner above described, it would probably become more seasonable.

Let then the good planter be kind not only to his fellow creatures, but merciful to his beasts, even for the sake of the owner; giving them plenty and variety of wholesome food, clear water, cool shade, and a clean bed, bleeding them after a long course of hard labor, currying their hides from filth and ticks †, affording them salt, and other physic, such as experience prescribes; protecting them from the flogging rope-lashes of a cruel driver, (who needs no other instrument than a goad) proportioning their labor to their strength; and by every art rendering their work as easy as possible. The general management of planters is not perhaps more defective in any other respect, than in this: for, by pairing our cattle unequally, and by the drivers ill conduct in writhing to the right and left, the poor creatures are fatigued by needless labor. Let therefore the English husbandman be our exemplar, who trains his cattle to an even draught, by harnessing an horse before them as a leader.

† One pound of native sulphur, a quart of lamp-oil, and the like quantity of hogs lard, intimately mixed and made into an ointment, is a cure for the mange, lice, &c.

leader. This docile creature, by being led in a strait line, will soon learn to be an unerring guide, and the cattle will follow in the same direction, with united strength; and consequently with more effect, and less fatigue to each individual.

But if the English husbandman's example be thought too expensive by the addition of a horse or mule to every team, let the practice of the Portuguese of the island of Madeira be our pattern in this respect, however ignorant and unskilful in all other mechanic arts. These people, by their poverty and scantiness of pasture, breed the smallest kind of cattle, and yet one yoke of them will draw a much greater weight than a pair of our largest oxen, solely by an equal exertion of their joint strength. That equality or evenness of draught is preserved by boring gimblet holes thro' their horns, within two inches of the points, and running a thong of leather thro' those holes, so as to tie the horns of each pair at six inches distance from each other. By this ligature the pair of cattle are absolutely hindered from turning different ways, and draw in an even direction with united force. Thus it appears evidently from reason, as well as from experience, that the labor of our beasts may, by a little contrivance, be rendered more easy and effectual. Nothing contributes more to the easy draught of carriages than a *right make* of the axis, the bottom of which ought to be a *strait line*; and the slope at the ends, made from the upper part, and the sides. It is also found by late experience in England that *broad wheels* are preferable much to *narrow*: and I have by experiment found it so; but especially in wet weather. Axle-tree irons lett in at the lower side of the axis,

answer

answer much better than clouts ; preserving the wheels in a proper position, and the axis from wearing, six times longer than usual †.

Having thus treated the management of negroes and cattle, as the main springs of a sugar-plantation, let us now consider the various parts of plantership, from the first step of cultivating the soil to the completion of that work ; not minutely or systematically ; for that is needless, since every young planter must learn what he sees every day in common practice, or the topic of conversation : but my principal intention is to reform vulgar, and gross errors in capital points ; and without dogmatizing, to advise some improvements in agriculture, taken from the practice of British husbandmen, who are now become the patterns of all Europe ; submitting however each precept to the correction of my experienced brethren the planters, to whom this work is dedicated, and by whom it may be improved by such useful additions or emendations, as future experience shall justify : but since order or method contributes to perspicuity, I have chosen to divide the subsequent work into sections, under the following heads. First, of the culture of various kinds of soils ; secondly, the best method of cultivating sugar-canes ; thirdly, the best method of making sugar ; and fourthly, of making rum.

† Mr. Foster, ironmonger of London, has the proper models of such axle-tree irons ; and also of clamps for cart-tongues, better constructed to render them durable, than any now in use.

SECTION

SECTION I.

Of the Culture of various Soils.

IN the British sugar-colonies there is as great a variety of soils as in any country of Europe, some naturally very rich or fruitful, yielding a luxuriant product with little labor or culture. This fruitful soil is of three kinds : a loose hazel mould mixed with sand like that of St. Christopher's, and is the best in the known world for producing sugar in great quantity, and of the best quality. The brick mold of Jamaica is somewhat of the same nature, and next in value; and then the various mixtures of mold and gravel, to be found in veins or plats, over all the other islands. When any of these soils are exhausted of their fertility, by long and injudicious culture, they may be restored by any kind of dung well rotted; for these † warm soils cannot bear hot unrotten dung, without being laid fallow for a considerable time after it. Another improvement is by sea-sand or sea-weed; or by digging in the cane-trash, into steep lands, and by letting it lie to rot for some months : a third method is by plowing and laying it fallow; and the fourth method (the best of all) is by folding the fallows by sheep. But this can be practised only where there are extensive pastures; nor can the plow be employed where the soil abounds with large stones. In that case, however, the former method of digging
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† Those soils which are naturally loose and upon marle, I call hot soils; and these have been much injured here by dung hastily made with marle, which is adding huskiness to huskiness : but if the sediment of lees were thrown into these pens, after being turned over, it would much improve the dung.

in trash will be nearly as effectual, tho' more expensive, by hand-labor, or hoe-plowing.

The next best soil for producing good sugar, is a mold upon clay, which if shallow, requires much culture and great labor, or its produce will be small in quantity, tho' of a strong grain and bright color, so as to yield most profit to the refiner of any sugar, except that produced from an hazel or gravelly soil, as before mentioned. All the black mold soils upon marle are generally fruitful, and will take any kind of dung; but yield not so strong, or large grained sugar. Marle, however, of a white, yellow, or blue color, or rich mold from washes, or ashes † of every kind, are excellent for every strong soil, as the chief ingredient in the compost of dung; and either will do alone for stiff lands: but the yellow and chocolate marle are the most soapy, and the richest kind of manure (except fine mold) for all stiff lands. If these are well opened, pulverised by culture, and mixed with hot dung, or any kind of loose earth or marle, they will produce as plentifully as lighter soils: and all kinds of clay soils, except that of a white color, have these two advantages above the finest gravelly soils, that they do not scorch soon by dry weather, and never grow weary of the same manure, as most other soils do.

The extraordinary hand-labor now bestowed in making dung, may be saved by the *art of caving* now in general use in England. Ten mules or horses, and two light tumbrells with broad wheels, and ten
able

† The common neglect of preserving ashes from wet, renders them of no more value than barren sand: for the great excellence of ashes lies in the salts, which are dissolved and washed away by rain.

able negroes, may, by the common use of spades, shovels, and light mattocks, or grubbing-hoes, make more dung, than sixty able negroes can do in the present methods.

If marl lies upon rising ground, or in hillocks, as it often does, the pit is to be opened at the foot of the declivity; which being dug inwards, till the bank is three feet high, then it is to be *caved* thus. Dig an hollow space of 12 or 18 inches deep under the foot of the bank, then dig into each side of it, another perpendicular cut of the same depth, and 18 inches wide, from the top of the bank to the bottom: that being finished, make a small trench a foot or two from the brink of the bank, pour into it water till full, and when that is done, fill it again, till the water soaking downward makes the marl separate and fall down all at once. This may be repeated till the pit rises to 50 feet high; and then many hundreds of cart-loads of marl may be thrown down, by 4 negroes in 2 hours; from whence it may be carted into cattle-pens, or laid out upon lands, as occasion requires: 5 or 6 negroes with spades or shovels will keep 2 or 3 tumberils employed, according to the distance of cartage: and thus as much dung may be made, by ten negro men, as will dung richly at least 70 or 80 acres of land every year, and laid out also with the assistance of cattle-carts. An improvement highly worth every planter's consideration, when negroes, and feeding them, are so expensive: and this is no speculation, but is in fact my practice. In level lands the same operation may be as effectual, provided the mouth of the pit be opened by gradual descent to any depth: but when marl is to be found on the side of hills, the operation is less laborious,

rious, for the horses. But if the surface of the marl-pits (as it often happens) be covered with clay, or stiff soil, so that the water cannot quickly soak from the trench above; in that case, pieces of hard wood, made like piles, 4 feet long, and 4 inches square, pointed at one end, and secured at the other square head, by an iron clamp, may be driven by heavy mauls into the trench, as so many wedges, which will make the caved part tumble down: but a skilful eye must watch the last operation, or the laborers may be buried, or hurt.

But then clay-soils that are level, and subject to be drowned, or to retain water in stagnated pools, can never be made fruitful by any kind of manure, without being first well drained: for water lying upon any soil will most certainly transform it to a stiff unfruitful clay: as appears evidently by the bogs of Ireland, the fens of Lincoln and Cambridgeshire, and even by the ponds of this island situated in the deepest and lightest black mold; for, that fine soil being washed into those ponds, becomes the stiffest black clay, not fit even for an ingredient in dung, until it has been laid dry, and exposed to the sun for a whole year: but when these bogs and fens are well drained, they become the most fruitful soils. Natural clay the celebrated *Boerhave* thinks the fattest of all soils; but then it must be opened by culture, marl, or sandy manures. It is hard to conjecture how the opinion prevailed here that sandy gut-mold was most unfit for clay-soils, as being the means of binding them to the compactness of brick; whereas it is evident, from long experience, one of the best means of opening clay-soils, and rendering them abundantly fruitful. Brick

is made of clay alone, no sand being used in it, farther than to sprinkle the board on which it is moulded into shape. From my own repeated experience, I can vouch with strict truth, that a mixture of sand in gut-mold is the best of all manure for stiff and barren clay-lands; provided they be well drained, by throwing the whole soil into round ridges of 12 feet wide, with furrows of three feet wide, between each ridge: and this is done with little more hand-labor, than that of hoe-plowing well, in the common way: for if a piece of land be marked in lines at seven feet and a half distance from each other; and the laborers are set in to hoe-plow at the second line, halling back each clod twelve inches, half the ridge, and near half the furrow, is made at the same time: and thus a piece of land may be round-ridged, and the furrows all made at once, by the common operation of hoe-plowing; provided the digger drives his hoe up to the eye at every stroke. Hoe-plowing in clay-soils that have lain long under water, is indeed hard labor; but it will every year grow the lighter by being well drained by round-ridging: and in the mean while the labor may be rendered much more easy by the plow, conducted by the lines above described. As therefore sandy mold is the best manure for stiff clay; so by parity of reason, confirmed by long experience, stiff clay is the best manure for sandy or chaffy soils.

The method of round-ridging before described, is, by several years experience, since the first Edition of this Essay, found the most essential improvement of flat clayey soils: and yet there are some scepticks, who will prefer speculation to ocular demonstration, fancying that all kinds of ridges will carry off the

mold in heavy rains. The fact is otherwise in clay-foils; and plain reason, without experience, vouches, that where great confluxes of water are divided into many small rills, the force is broken; and therefore less mold carried off the land. Another objection made to round-ridging, is, that by digging much clay to form the sides of the ridge, impoverishes the soil: but this objection stands good only against those ridges which are raised too high, and made too broad: but if land is ridged in the manner before directed, that is 12 feet broad, and not above 6 or 8 inches higher in the middle than at the sides, the objection vanishes. Ridges were never proposed for light soils or steep lands: and even in flat soils upon loam, should be made with great caution: because *loam melts away by water*, as butter does by heat. But there are poachy lands of a white clay, even upon small descents too retentive of water; these may certainly be improved much by ridges of 12 feet wide, as above described, without fear of washes.

But supposing, as the objection urges, that a little clay should be turned up at the sides of such ridges; can it not be manured somewhat more than the other parts, with marl, or sandy mold, so as to become equally good, as any part of the soil? And is not this well worth the labor, since round-ridging not only improves the soil by draining it to a wonder; but adds one fifth part to the depth of the staple? And will not a ridge made a little rounding, throw off the water much better than a flat ridge? Let the sceptick answer these questions, and he will confute all his own objections.

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The general maxim of not burning cane-trash (which may be called the stubble of cane-lands) upon any kind of soil, is surely a great mistake; as may be evinced by observing the contrary practice of the best husbandmen in England, where *burn-baiting* or *bastard-burn-baiting* † is found by experience an admirable method of fertilizing cold, stiff, or clayey lands. It must be my constant practice, not only for the sake of contributing to warm and divide the soil, but as the only effectual means of destroying pernicious insects, and weeds of various kinds, such as French weed, wild pease, and wild vines.

Soon after the disuse of burning trash upon our lands in this island, I remember the blast made its first appearance with incredible devastation: to revive that practice therefore seems to be the most obvious means of expelling it. It may be presumed that the disuse of burning trash was founded upon the mistaken notion of *burn-baiting*, which is turning up a thick sod of very dry, light and shallow soils, and burning the whole superficies, or staple, to ashes. This practice the writers upon husbandry condemn universally, and very justly: for tho' by this practice the land will produce 2 or 3 crops more plentifully than ever, yet the soil is blown away by the wind, and the substratum being generally an hungry gravel, or chalk, can never be restored to fertility by the common arts of husbandry: but surely this has no resemblance to our superficial burning of the little trash we can spare from dung: and tho' this method of burn-baiting *light and*

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shallow

† See the excellent new system of husbandry now publishing in London by *Osborn* at Gray's Inn, and others, numb. 8, page 90.

shallow soils be justly condemned, yet the best writers recommend that very practice, in cold, moist, and heavy soils, as is observed above; and long experience justifies it.

Deep mold upon clay or loam being subject to the grub-worm *, will not take any kind of dung, till perfectly rotten, except that of the sheep-fold, which is the best manure for all kinds of light soils, and is of all others the least expensive, as not requiring hand-labor. But the use of the fold is impracticable in any island not abounding with large Savannas, or sheep-pastures, as in Jamaica.

Those soils therefore which are subject to the grub, and must be fertilized by common dung, which is a proper nest for the mother-beetle to deposit its eggs, must be well impregnated with the brine of dissolved salt, after the dung is first cut up; two large hogheads of salt will make brine enough for a dung-pen of 50 feet square.

This cure for the grub is a late discovery for which I am obliged to a judicious planter, and which I have tried with success, so far as the experiment is made. But tho' it proves effectual to destroy that pernicious insect in plant-canes, I much doubt, and believe it will not be sufficient to save rattoons, without a new application of salt pounded to a powder; because the first brine must be washed away, by the time when rattoons spring up.

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* This pernicious insect is most apt to ingender in dung made from mill-trash, which therefore never ought to be put into dung-compost, or still-ponds; but after being burnt, the ashes will be as good as any other kind. Round-ridging, with manure of unwet ashes, sea-sand, or lime, or dry marl, kills the grub.

I therefore advise the planter who would save his rattoons from grub, to cut off the heads of his stools by sharp hoes 3 inches below the surface of the soil, and then strew an handful of salt round each stool, and cover it up to a level with fine mold taken from the edges.

In soils where there is no grub, and the planter wishes to have very good rattoons, let him, so soon as his canes are cut, draw all the trash from the stools into the alternate spaces, if planted in that manner; or into the furrows, if his land be round-ridged, and then cut off the head of his stools with sharp hoes, as above directed. Actual experience has convinced me of the benefit of this practice, and reason led me to it, by shewing the great benefit of the rattoon-sprouts rising from 3 inches below the surface, instead of superficial shoots which came to nothing, and only starve the strong sprouts. Besides, the stubbs which are left upon the stools, after the canes are cut, canker, and rot the stools, which is one reason why good rattoons are uncommon in soils long cultivated. Yet it is the opinion of a judicious friend, as well as my own, that by hoe-plowing and even dunging rattoons, the produce might be as good as plant-canes, which would save the labor of holing and planting so often as we do.

Fallowing is of incredible advantage to every soil, not only by being divided into the minutest parts; but also by imbibing those vegetative powers, with which the air is impregnated by the bountiful hand of providence, whenever rain falls. What those powers are, we can only conjecture; nor is it material for us to know, since experience evinces this fact, that the ten-

der vegetables of the earth are enervated more by the smallest shower of rain, than by all the water which human art can bestow. Let it therefore be a constant maxim of the judicious planter, never to plant his ground until the soil is well mellowed by fallowing, even tho' he bestows upon it a due proportion of dung: I say a *due proportion*; for too much will force up rank canes which never yield good sugar; and tho' some advantage may be reaped from the ratoons, yet it will be found by experience not to compensate the loss by the plants: for I have known an industrious planter diminish and debase his produce, to his own disappointment, by overloading his soil with dung; which is in effect to grow poor by industry. In stony or steep soils, where the plow cannot be used; or where a sufficient strength of cattle cannot be supported for that purpose, hand-labor, or hoe-plowing must be substituted; but even in that case, much labor may be saved by spreading the dung according to the English husbandry, and digging it into the soil. To evince this truth against the erroneous practice now in fashion, let any planter compute his negroes labor of distributing dung by baskets, and by spreading it with dung-forks, and then judge for himself by one single experiment, which is the most profitable.

But if some planters are so devoted to the old custom of distributing dung by baskets, instead of wheelbarrows in level ground, or hand-barrows in uneven land, by which three times the labor may be accomplished in the same time, and by the same hands; let them at least save much of their hand-labor, by
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the following method of laying out dung, before the distribution by baskets.

In holing a piece of land, let a *space be left after 80 holes*, from the first interval; and then the like space after 80 holes, throughout the whole plat, which spaces must run exactly parallel to the intervals, on the right and left of the holes. Into these spaces the dung may be carted, even before it be rotten †, at the most leisure times, and covered with mold, or cane-trash, to prevent exhalation; and in such quantity as will suffice only to dung a row of 40 holes, from the point opposite to each side of it. In the intervals at each side of the cane-piece, which are parallel to those spaces, there must be dung enough carted, to manure a row of 40 holes, and covered in like manner.

By thus placing the dung or gut-mold, it is evident at the first sight, that the farthest distance cannot be above 40 holes in distributing the dung: and in case it be not sufficiently rotten for present use, it may be distributed even in dry weather, and covered by the bank, which will both prevent its spirit from exhalation, and occasion it to rot sooner, which is no small advantage. Moreover, by being thus laid out at the most leisure times, and covered with the banks, the dung will be more intimately mixed with the soil, and therefore continue to nourish the plant for a longer

† In order to make dung rot the sooner, much labor is bestowed in digging and turning it over by hoes: but two thirds of that labor may be saved by the use of hay-knives, six of which used dexterously will cut up a pen in less time, than 60 negroes can do by hoes: but hay-knives cannot be used where gritty mold is used in pens.

ger time, than if laid as usual at the bottom of the holes. A farther advantage of thus distributing the dung, and covering it, results from the more expeditious planting the land, after a short or sudden shower: * for the labor of covering the dung, and uncovering it when the land is planted, however it may appear in speculation, is in practice a trifle; and besides all the other advantages arising by the distribution of dung from the spaces above described, this is not the least, that not a bank is trodden under foot. But it is evident, that by distributing the dung with baskets in the present method, the soil is much trampled under foot, and by that means, the very end of hoe-plowing, or loosening the soil, is much defeated. In like manner, by the present method of hoe-plowing, the same ill effect is produced; for as the negroes hoe-plow or dig the soil *directly forward*, so they must necessarily tread the ground as fast as they dig it: whereas by putting the laborers to dig *sideways* †, no one puts a foot upon the soil after it is dug: and by lining the land before it is hoe-plowed, each negro may have an equal share to dig. Whether hoe-plowing before or after the land be holed for canes, is most eligible, experience must determine: but certainly both

* Dung being a natural ferment, divides the soil sooner, and for a longer time, than by culture. It is needless to describe the usual methods of making still-pond-dung, or any other sort; because the meanest overseer knows those methods: let it suffice then to observe that the hottest kinds of dung are fittest for cold soils, and the coolest for hot; only I would caution the makers of dung to truss their pens lightly, and lay the manure deeper than usual.

† The only difficulty of hoe-plowing sideways is in first setting the negroes to that work; but may be done without loss of time when working in a contiguous field.

both operations will be most effectual ; and therefore I beg leave to advise †, first to plow the soil where the land will admit the plow ; and where it will not, to hoe-plow it with, or without dung, as requisite ; then let it lie fallow till perfectly mellowed ; then hole and plant it ; and instead of weeding in the usual manner, let the weeds in all the spaces be dug into the soil : but as this is not to be done so well with the hoe, I submit to future experience, whether the dexterous use of spades, as in England, will not answer the purpose much better, and with equal dispatch. But whatever method is preferred, most certain it is, that by loosening the soil in all the spaces between the young canes after being come up, their fibres will more easily expand on every side, and acquire more nutrition to invigorate their growth. But where the planter grudges this labor, by thinking it needless in a rich loose soil, he may dispatch more weeding - work by the Dutch hoe, than by any other ; which being fastened upon the end of a stick, is pushed forward under the roots of the small weeds, in such a manner as to cut them up a little below the surface of the soil, and will do more execution at one shove, than can be done at three strokes of the common hoe ; as general practice evinces in all the gardens of England : but there is yet another practice of the horse-hoe-plow, whereby all weeds growing in rows between beans and pease, are extirpated with incredible ease and expedition,

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† Deep and loose soils may be plowed with a small strength of cattle or mules : but stiff lands in this hot climate require more strength of cattle than we are able to maintain in our small pastures : for if those strong soils are either too wet, or too dry, (as is generally the case) plowing is impracticable.

all over the county of Kent. It is a very simple machine drawn by one or two horses, consisting of a pair of low wheels turning upon a common axis; from whence two square irons are let down at equal distances, and triangular hoes made at the ends, the points of the triangles being placed forward, and so fixt as to cut all weeds an inch below the surface, in the same manner as the Dutch garden-hoe above mentioned. By this machine a man and a boy, with two horses or mules, will clear perfectly all the spaces of a field of ten acres in two days, and may be of admirable use in all our loose and dry soils: for while two horses or mules draw in the space before each other, the wheels pass on the outside of each row of canes, without doing the least injury, while the plowholder attends to his business. In stiff soils which require draining, I conceive neither the horse-hoe-plow, nor the Dutch hoe can be proper; or any other instrument so effectual as the *spade* used in the manner above hinted, where the staple is deep.

But where the staple of land is shallow, there care must be taken not to dig much below it, according to the universal opinion of all the best writers, supported by the experience of an hundred years. Yet I find some good planters are fallen into the contrary practice, and dig up stiff clay far below the staple. This was done in my own lands, during my absence, by injudiciously plowing below the staple; and so injured the soil, that, with all the arts of culture for many years, hardly retrieved its former fertility. Indeed where the staple is shallow, upon a fat clay, there turning up *a little of it at a time*, from the bottom of the cane-holes, and mixing it with rich hot dung, made

of marl, or sandy mold, which may take off its cohesive quality, will in due time, and by long fallow, be converted into good soil: but if stiff clay be turned up, without any such mixture, in large quantities, it will infallibly disappoint the operators hopes: for tho' solid clay will moulder by exposure, to a seeming fine earth, yet it will return to its primitive state, very soon after being wet, and covered from the external air, if not divided, as above suggested.

After all, the common horse-hoeing-plow †, drawn by two mules in a line before each other; or the hand-hoe in common use, will answer the purpose very well, where the lands are planted in Mr. *Tull's* method; that is, where the spaces are equal to the land planted, in the following manner.

Suppose six feet planted in two rows of canes, and six feet of land left as a space unplanted; and so a whole piece of land, planted in alternate double rows ‡, with equal spaces, may be hoe-plowed with ease, as before hinted; and that at any time during the growth of canes, when it is most convenient to the planter, which is a considerable advantage; and yet it is the least of all attending this admirable method of culture: for, by leaving these spaces, the canes will have both more air and sun: by hoe-plowing them, the roots of each double row will have large

† It is wonderful that the horse-hoeing-plow has not been used in all the loose soils of this country, when by that means infinite hand-labor may be saved: indeed it cannot be used so commodiously in the close way of planting, but the spaces of alternate double rows is admirable fitted for it.

‡ In stiff lands the *single alternate rows* of 4 feet distance, as preventive of much labor in weeding, are found best; and also yield more sugar by the acre; and are less apt to be affected by drought.

large room for expansion, and consequently, by gaining more nutriment, will grow more luxuriantly : by these spaces the canes may be cleaned from the blast with much more ease and convenience ; and will serve as proper beds to plant great corn, without the least injury to the canes ; as well as to contain the trash taken off the land, where by rotting, and being hoe-plowed into the soil, it will be wonderfully enriched, and well fitted to be planted immediately after the canes in the neighbouring double rows are cut down. Besides all these admirable advantages of planting the land in alternate double rows with equal spaces, the canes, when at full age, may be easily stripped of their trash, and by that means the juice rendered so mature as to yield double the produce, and much better sugars than unstripped canes, as I have often found by experiment. This method of culture I therefore earnestly recommended for all kinds of soil ; for as by this practice the rank luxuriant canes will be more matured, so the poor soils will be rendered more fruitful : and as the roots of the canes which expand into these spaces, will be kept moist, by being covered with rotten trash ; so they must bear dry weather much longer in the burning soils *. In those low lands which require draining by furrows, the alternate double rows and spaces must be made cross the ridges, by which means, those spaces being hoe-plowed from the center to the sides, will be always preserved in a proper state of roundness

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* By this method of planting, the canes may be so well ripened as to yield double the quantity of sugar, of canes planted in the close manner, which saves half the labor of cartage, half the time of grinding, and boiling, and half the fuel, besides yielding finer sugar.

How well soever the method of planting in single or double alternate rows has succeeded in the loose and stiff soils, two years experience since the former Edition of this Essay, has convinced me, that it is a wrong practice in stiff lands, that are thrown into *round or flat ridges*: for these being most apt to crack, the sun-beams penetrate soon to the cane-roots; stop their growth; and have an ill influence upon the sugar. I therefore advise planting such lands full, but in large holes, of 4 feet, by 5 feet towards the banks: after the plant-canes are cut, to dig out one, and leave two rows standing, hoe-plowing the spaces after turning all the trash into furrows till almost rotten: for if the trash is drawn upon the hoe-plowed spaces, they will hardly ever moulder; at least not till the trash is quite rotten. This is an infallible proof from experience, of how little advantage trash is to the soil, unless it be in great droughts, to keep out the intense sun-beams: for, in all other respects, it prevents that joint operation of the sun and air, in mouldering, and fructifying the soil, as I have proved by repeated experiments.

But in flat stiff soils that are properly drained by round-ridging, no culture prevents *cracking* so effectually, as hoe-plowing into them a quantity of loose marl, of which that of a chocolate, and a yellow color, are best: and will be still much better, by lying upon the land, in small heaps, or in cane-holes, for some time, to imbibe the vegetative powers of the air, before it is intimately mixed with the soil: for when the best kind of marl is first dug, it is but dead earth, unfit for vegetation.

Since the spirit of husbandry has appeared in this island, a vast variety of excellent manures have been discovered,

covered, even in stiff lands, where it was least expected and most wanted: as if the author of nature meant to convince mankind, that the greatest industry shall receive the greatest reward, and that the poorest lands have in them the best means for fructification. These numerous discoveries are a just encouragement for a strict search by borers in every soil not rocky. Seek and ye shall find, seems to be as true in husbandry, as in divinity.

It is needless here to describe the manner of planting canes, since the general practice of allowing four feet by five, to an hole, and two fresh † plants, is found by common experience to be right and good in alternate rows: for, this little tract is not designed as a complete system of planterfhip, but only an essay to farther improvements, and to reform the gross and common errors now in practice. For the same reason therefore little more shall be added to the subject of planting and cutting sugar-canes than a few precautions. First, let all the cane-rows run east and west, that the trade-wind may pass freely thro' them; because air and sun-shine are as conducive to the growth and maturation of sugar-canes, as any other vegetable. Secondly, let not any accession of mold be drawn into hills round the young canes, except where water stagnates ‡; because the fibres which run hori-

† It is an odd fancy that stale plants grow best, when both reason and experience vouch that the most succulent plants are best: one good plant in the center of a large hole is sufficient when the land is full holed.

‡ The stagnation of water in pools (usual in stiff level lands) is the most injurious circumstance attending it; for that, by long duration, will convert the finest mold to stiff clay. The proprietor of such a soil must

horizontally, and near the surface, are much broken and spoiled by that practice. Thirdly, let the sugar-canes be cut at their full maturity, which in dry loose soils, is generally at the end of fourteen or fifteen months after being planted; but in cold clay-soils not till sixteen or seventeen months. Fourthly, as the cane-rows run east and west in a proper direction as possible for cartage to the sugar-work, so canes must be cut the contrary way if the planter expects any great produce from his rattoons: for by beginning to cut canes at the part of his field most remote from the works, the carts cannot often pass over the same track; and consequently the cane-stools cannot be injured; more especially if he takes due care to cut the canes very close to their roots: for, by leaving a long stub, (which must perish) the cane-stools are much injured. It may be objected to the practice of cutting canes transversely to the rows, that the negroes labor will not be so equally divided: but let every man consider both sides of the question, and be determined by his own experience; and then he will be convinced, that it matters very little which way he cuts strait standing canes; but in cases where the sugar-canes lean, or are lodged by preceeding high winds, it is a point of great importance to place the laborers so as to cut the canes *first at the roots*, and then drawing them, cut off the tops: for thus by two strokes each cane will be cut; and twice the quantity cut in the same

must therefore grudge no labor to drain it well; and yet by such easy gradation, as to prevent the mold from being washed away by great floods, in case the under stratum is a loam.

same time, and by the same hands, more than by cutting in any other direction *.

It is also needless to suggest the expediency of planning the cane-pieces of a plantation in exact squares, so that the intervals may intersect at right angles; since such regularity is not only more beautiful; more safe in case of accidental fires; and a better disposition of the whole for dividing and planting *one third or fourth part* of a plantation every year; but also much easier guarded by a few watchmen: for, one of these walking in a line from east to west, and the other from north to south, look thro' every avenue, where the most subtil thief cannot escape the watchful eye. And if the intervals surrounding the boundary of a regular plantation, be made twenty-four feet wide, the proprietor will receive ample recompense for so much land; by the security of his canes from fires kindled in the neighbourhood; and by planting all that land in plantain-trees, which may at once yield *food and shade* to the watchmen; who by that means can have no excuse for absence from their proper stations. But as fuel grows very scarce in most of our islands, it is also expedient to plant a *logwood* † or *flower-fence* in all the boundaries of every plantation, which being cut every year, will furnish good store of faggots, as by its perennial growth much contention will be prevented among neighbours, by pre-
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* In round-ridged land it is most proper to cut canes in the same direction of the ridges, throwing the tops and trash into the furrows to render the cartage easy, and to preserve the ridges in their proper form.

† Logwood makes the strongest and quickest of all fences, and agrees with every soil: the cuttings make excellent oven-fuel.

serving exactly the old boundaries ; a point well worthy the attention of every honest man who loves his whole species, and wishes to live in amity with every individual of it. Our lands being thus disposed in regular order, and manured according to the nature of the soil, let us now proceed to the second head proposed.

SECTION II.

Of the best Method of cultivating Sugar-canes.

IT is necessary before we enter upon this subject, to remind the reader, that the various methods of culture above suggested, require at least twelve negro men, and twelve yoke of able oxen, more than are wanted for the other uses of a large plantation : for, if so much dung, the spreading of marl, and long fallowing, be necessary to improve the soil, these must be employed during crop-time for those purposes, under the direction of a skilful husbandman, who may teach his laborers the dexterous use of the spade, and dung-fork : for, by that means four negro men will load a cart with earth or dung in less time than ten women can do with baskets, according to the present custom. Thus all the cattle-pens may be supplied by carts with plenty of earth or marl during dry seasons, and great quantities of dung made ready to be spread and plowed into the soil, when moist weather invites, without hindering the progress of the crop ; provided the mold be distributed by wheel-barrows † : thus also a
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† When carts cannot carry mold into the pens, then wheel-barrows
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great quantity of ground so prepared may lie fallow for a considerable time, and be fit for planting at the first of the season, which is the surest method of securing an early and plentiful crop, as every judicious planter knows by experience.

In stiff soils where canes require most age, half the quantity of land intended for the crop should be planted in September: but in hot loose soils in October and November: and the whole planting-season conclude with the month of January or February †, when the tops of the first canes cut, may furnish the last pieces planted. By strict observance of this method, the canes will be at full maturity in the proper season for yielding most sugar, which is from the first of January (if the weather permits) to the 29th of July. But by grinding later, we hazard not only the destruction of our wind-mills by hurricanes, but make bad sugar, at infinite expence of time and labor, both of negroes and cattle, when the juice of canes becomes weak and waterish. There is not therefore a greater error in the whole practice of plantership, than to make sugar, or to plant canes at improper seasons of the year; for, by mismanagements of this kind every succeeding crop is put out of regular order, tho' a plantation ought to be considered as a well-constructed machine, compounded of various wheels, turning different ways, and yet all contributing to the great end proposed: but if any one part runs too fast or too slow

may be substituted to save intolerable labor in the use of baskets. By those wheel-barrows dung may be laid out in the holes to great advantage, since one negro may carry four or five baskets of dung.

† In light luxuriant soils, canes planted in April or May often produce largely: but it seems not prudent to delay so long, for fear of disappointment by drought.

flow in proportion to the rest, the main purpose is defeated. It is vain to plead in excuse the want of hands or cattle; because these wants must either be supplied, or the planter must contract his views, and proportion them to his abilities: for the attempt to do more than can be attained, will lead into perpetual disorder, and conclude in poverty. Indeed when severe droughts or unseasonable rains happen contrary to the general course of nature, the wise planter must do the best he can, chusing always the least of two evils.

The land being well manured, and mellowed by fallowing, let it be lined into spaces of four feet distance, and then holed either backwards or sideways †, as the manager thinks best, taking particular care that the cane-holes be made square at the bottom, and heaping the banks high, so as to take up little space. After holing, the land should lie in that posture until every little lump crumbles into fine mold, and then be planted before weeds spring up in any great abundance; for if planting in due time is neglected, the soil subsides, grows compact again, and defeats much of all the former tillage. The land being thus holed, and mellowed by fallowing, let two good plants be put into each hole at equal distance from the center: for if many plants be put into an hole, the sprouts will rise too plentifully, so as to hinder each others growth, and produce very small spindling canes, which can yield but little sugar; for sugar-canes (as has been intimated) require more air and sun-shine than most other vegetables.

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† If the holes are made 4 feet wide one way, and 5 feet from bank to bank, the bottom of the hole will be a true square.

The plants being thus placed in each hole, with the eyes horizontally, must be covered, in loose dry soils, not above two inches deep; but in stiff ground one inch is sufficient, leaving the banks to be added by small accessions at every weeding, and the one third to be reserved for covering the stools of the rattoons, which will much forward their growth: but let the common custom of drawing mold into hillocks round each stool of young canes be avoided; because that practice breaks the young superficial fibres, and leaves them bare to perish by the scorching sun. Stiff or clay-soils, if well drained in the manner before directed, may be planted hollow, as the lightest, to the same advantage; for I am very certain, that covering the stools of rattoons with one third of the bank left for that purpose, is preferable to hoe-plowing, alone. As such level stiff soils, free from stones, are most improveable by the plow †, the husbandman's chief care should be to plow the land into ridges, as before directed, rising gradually from the sides to the centers: for, then the rain-water will pass off with ease thro' the furrows, and save all the hand-labor of draining, except small trenches round each field, thro' which the water may pass gently, without washing away the mold: for, where all preceding arts are practised to pulverise the soil, peculiar care must be taken to prevent

† The plow, I find by experience, in the stiff soils of this climate is impracticable, because such soils are either too wet or too dry for the purpose; and it requires more strength of cattle and horses than our small pastures can sustain: but all our light soils are plowable at any season of the year with a few draught-beasts. Indeed if dung is laid out by carriages as before advised, it will be a full employment for our cattle and mules, without the use of the plow.

vent its washing away by floods of rain; or the land will soon become barren.

It has been suggested before, that two good plants are sufficient for an hole of the dimensions above mentioned: but in smaller holes one only is used by some judicious planters with good success. Drawn plants from rattoon-sprouts of six or eight months old are very good; and in some respects preferable to the tops of old canes, as having short joints, and of course more eyes, and plumper than the others. It is, however, generally observed, that the tops of old canes are the hardiest plants, capable of bearing the extremity of dry or wet weather, better than any other; but if the fibrous roots of drawn plants are cut off, no man will have reason to complain. He, therefore, that for the sake of tops, will reserve old canes, and grind the bottoms out of the natural season for making sugar, at the risque of destroying his wind-mill by hurricanes, acts as wisely as the miser, who loses a pound to save a penny. To use the tops of grown canes for the last pieces planted, from January to May, is very good management: but drawn plants will answer perfectly well at all other seasons of the year, and of these an abundance may be provided by a right forecast, if unseasonable droughts do not prevent: and good allowance must be made for such events. For forecast is a prime qualification of the good planter in that and all other cases. By that he divides his plantation into *three, four or five* equal parts, in proportion to his strength of hands and cattle; allowing one third, fourth, or fifth part to be planted every year: and if he contrives to cut plants always from a contiguous field, much cartage in wet weather will be prevented: much

of his negroes time saved in passing from one distant field to another, and still more if mules are employed to carry plants.

But after all this care in the preceding process, sure disappointment will attend the planter who neglects timely weeding his young canes, which by once being over-run by weeds, will be so stunted as never to become very good, by any subsequent helps: let therefore every manager be as careful and nice in preserving his canes clean from all weeds, as the Florist is of his Parterre; postponing every other work, when that calls for his labor; and if instead of scraping up these weeds with common hoes, according to the present practice, he could employ the Kentish hoe-plow, infinite hand-labor may be saved: or if the nature of his soil be stiff or stony, so that the hoe-plow cannot be used, I am persuaded that by digging all weeds into the soil with spades or hoes, and loosening it by that means, as gardeners do in England, the sugar-canes would be so invigorated as to recompense the labor beyond our present conception. No devastation by that pernicious insect, called the blast, could then take place. All the schemes hitherto proposed for curing that evil, that fore-runner of the planter's ruin, are vain, impracticable speculations, or a waste of time and labor, to little purpose: for, as human wit penetrates no deeper than the external surface of matter; so we cannot trace the influence and effects of material bodies acting upon each other one step farther than experience, or apparent real fact is our guide *. If then it be

* It is certainly a mistake to say that the blast infects not the canes of a rich soil. The contrary I know to be true by experience: and therefore

be a *fact* that the blast commits most ravage in poor land, and affects not the luxuriant sugar-canes of a rich soil; the cure of the evil is certain and obvious: *mature* and *cultivate* your lands so as to become rich and fruitful, and you will prevent the blast; more especially, if (according to the English husbandry) the produce is changed, by planting potatoes, yams, or corn in dry soils; and eddas or potatoes, in stiff lands: for by these arts the planter may be sure (if favoured by natural seasons) of canes that will reward his labor by plentiful crops of sugar; and it must then be his interest by skill and care to make it as good as possible, which shall be the subject of the following Section, after having given some new directions for the cultivation of rattoons.

It has been observed above that the stools or roots from whence canes are cut, are apt to corrupt, at the parts left above ground, and these of course canker the whole stool: hence it is that rattoons, or canes springing from those stools, are seldom very good, except in very rich soils; and therefore some good planters, to prevent those stubs above ground, draw their canes for sugar from the roots, which I believe effectual, but very laborious: but by a late experiment, it is found a less laborious method, after uncovering the stools, by taking off the trash, so soon as the canes are carried out of the field, to cut by a sharp hoe, all the *heads* of the cane-stools, *three inches below the surface of the soil*, and then fill the hole with fine mold; by which means all the sprouts rising from below, derive

therefore the best and only effectual cure is wiping the blades by wet cloths, until wet weather completes the cure.

rive more nutriment, and grow with vigour far beyond my expectation, and that of many other Gentlemen who have seen them.

This method I therefore recommend as a sure means of having good rattoons, even in lands not very luxuriant : and from hence I am led to believe, that rattoons treated in this manner, and the spaces between the rows well dunged, and hoe-plowed, would be less laborious and much more profitable to the planter, than the frequent holing and planting now in practice, and especially to those who labor in stiff soils, or have few hands. Nay, I am persuaded, if this practice of laying dung among the alternate rows of rattoons were tried in the loose husky soils, it would answer beyond expectation ; the canes would be less apt to burn, and the dung might be put into the soil much newer, provided it be well hoe-plowed in, and intimately mixed with it. The trial of a few acres cannot be much expence to any man, and is therefore worth the labor.

Perhaps the deep soils upon a loam, subject to the grub, which now cannot produce rattoons for that pernicious worm, might, by laying round the stools dung well impregnated with sea-water, or brine made from salt, be productive of the best rattoons ; for it seems probable, from some experiments now in hand, that dung thus brined, after being cut up, will destroy that devouring insect.

But this future experience must determine, and that such trials may be attempted, the reader is to be told, that forty bushels of salt, dissolved in water to a strong brine, and equally dispersed over a dung-pen

pen of seventy feet square and three feet deep, is the proportion observed in the experiments now promising success.

SECTION III.

Of the best Method of making Sugar.

IN making good sugar there is a great variety of incidents, of which, if any one fails, the end is absolutely frustrated; the wise planter therefore must be very attentive to every minute step throughout the whole process. It must be his first care to keep his mill in perfect good order †, so that common accidents may not retard his crop in the season, when canes yield the most and best sugar; every part of his works must be very clean, and his coppers hung so judiciously, as to boil perfectly well with little fuel; for, nothing contributes more to the making of good sugar, than quick boiling, after the cane-juice is well clarified. To this end therefore the great coppers, or first clarifiers, should be hung singly, or to separate fires, and pinned about ten or twelve inches from the bottom; that the scum may be separated by slow degrees, and kept floating upon the surface long enough to be taken off perfectly: for, if the liquor be suffered to boil with violence, the scum will incorporate again with it, and never after be separable but by the refining pan: and thus dark foul sugar is made of that cane-juice which

† It is a surprising remissness, now timber is so excessively dear, to expose our stocks, shafts, and the ends of our crown-trees, to the sun and rain during the whole winter-season, when such exposure is so easily prevented.

which might have produced, by good management, fine bright sugar of much greater value at the market. This is a point of great importance to every planter, whose profit depends much upon the goodness of his sugar: for, the worst pays the same freight, duty, and charges as the very best.

The cane-juice therefore, after being strained at the mill thro' a brass wire sieve, ought to run down to the boiling-house in spouts lined with lead, to preserve it from tainting†; and being let into the first clarifier, must be there boiled over a moderate fire until perfectly freed from all scum: afterwards it must be strained thro' a thick coarse blanket, and then boiled to sugar with all possible celerity. But let the coppers be ever so judiciously hung, the liquor cannot be boiled with due quickness, unless the manager takes peculiar care to provide great plenty of *dry fuel*, or mill-trash: a material circumstance in which there is a most absurd and general remissness. The good planter therefore will lay up a stock of brush-wood cut from the hedges of his boundary before the crop begins; or if he has plenty of wood, enough to serve the uses of his still-house; by which means he may soon lay up a large fund of mill-trash, and pack it either in ricks, or in a large trash-house, that the progress of his crop may not be hindered by every shower, or his sugar spoiled by dull fires.

But how can fuel be preserved from wet where there are not tight shades over the copper-holes? and how came it to pass that these shades are taken away, or suffered

† Mill-cisterns and all receivers through which cane-juice passes, should be lined with lead; because wood soon taints it, and the greatest artist cannot make the best sugar with tainted juice.

suffered to decay? Is it for fear of fire? That indeed is prevented effectually by water-soaking the fewel with every shower: but surely this is to incur certain, constant injury, for fear of that which is accidental, and may be always prevented by common care: for, besides wetting the fewel, we destroy the health of those negroes who make fire, by exposing them to all the extremities of a burning sun, and to every little rain from the dripping eaves of a boiling-house. These are absurdities that want a name; or have such as decency cannot use. But every passenger who observes a boiling-house without a shade, must certainly consider it as a monument of the * manager's folly, who either wants a good head, or a good heart, or both.

The judicious boiler's next care is to provide † quicklime of the best sort to temper his liquor; for, otherwise the sugar will be clammy, than which it cannot have a worse quality. That defect in sugar arises from two very different causes; for, slow boiling, and bad temper-lime have the very same effect. The lime made from marble, or any other land-lime-stones, is the strongest, and preferable to that made from white sea-coral; and the newer it is from the kiln the better: for, by keeping it in the tightest casks for any long duration, some of its good qualities evaporate; and therefore in the daily use of it, the air must be excluded.

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* By the word manager is evidently meant the chief director of a plantation, whether he be the overseer, his attorney, or prime agent.

† Having tried the pearl-ash in a variety of experiments, both in muscovado and clayed sugar, I must confess it answers no good purpose. On the contrary, it never fails to weaken the grain of sugar, and to impart its own quality of dissolving by exposure to the open air.

It is impossible to prescribe exactly the quantity of lime necessary for every sort of cane-juice †. Experience only can teach this art. It is, however, a good rule in general to give a full quantity, which can only be determined precisely, by the first sugar made; but by dipping a skimmer into the tach, when the liquor is boiled to near a syrup height, and by giving it two or three quick twirls, and then hanging the edges of it downward, an observing eye will discern the liquor falling from the skimmer in glassy fleaks. If these hang long, the liquor is not sufficiently tempered; but if short, breaking near to the edge of the skimmer, it is tempered enough. When cane-juice is tainted by excessive drought, so as to make foxy, bad sugar, there are various methods in use of extracting the taint. Among these I never found any so effectual as by high tempering the liquor, and when it is boiled to a thick syrup, throw into the tach two or three gallons of fair water, which by sudden solution, throws up the taint, or viscous scum (consisting of the lightest particles) upon the surface, from whence it must be skimmed off with all expedition, and reserved for distillation. By this practice, which I inferred from simple reason, it has been my good fortune to do signal services for some of my friends; and I dare affirm it to be a very effectual method of making strong bright sugar, from cane-juice very much tainted, provided it be rich, or at full maturity;

† I have observed that five ounces of the best quick-lime are sufficient for 100 gallons of good cane-juice. Instead of increasing the quantity of lime, I would advise the use of powdered allum, one quarter of an ounce of which, or less, to a strike of sugar, will give both firmness and largeness of grain: experiment will soon determine whether more or less allum will be requisite.

turity ; but if the sugar-canes are much tainted while the juice is waterish, all attempts to make good sugar of it, are vain and fruitless : for, then it is fit only for distillation. Indeed a strong or large grained sugar cannot by any art be made from waterish juice, even tho' untainted by drought : and therefore, when the judicious planter finds his cane-juice of that sort, let him strip his canes from all the trash, suffering them to stand for 6 weeks exposed to the air and sun, and he will find that labor amply recompensed by a large product of very good sugar, as experience has often evinced.

After duly tempering the cane-juice with the strongest quick-lime, clarifying it over a moderate fire, and straining it as before described, let it be boiled with the utmost quickness to a middling sugar-height, which will give it a large grain, and a fair color, never-failing qualities to procure the best price at market. This art of boiling sugar, tho' of the greatest importance to every planter, is (I know not by what means) generally least understood, either by overseers, or their masters ; but that point of greatest consequence is trusted wholly to the skill of negro-boilers, who indeed arrive by long habit to some degree of judgement by *the eye only*. To that eye-art I have attended with all diligence, but could never acquire a critical exactness : for, the sight, of all the other senses, is most fallible, and subject to deception : a little more or less butter thrown into the tach will alter the whole appearance, and often deceive the most attentive and experienced eye ; and no doubt there are other causes less observable, which produce the like effect ; and therefore I recommend boiling by the

touch



touch * also, which is abundantly more certain, as *two* witnesses are better than *one*.

To impart by words the knowledge of sugar-boiling by the *touch*, is as impossible as to teach any other mechanic art, which can be attained by practice only: however, to convey the most adequate idea I am able, let the reader pardon the tediousness of such a dry description, and observe this art of boiling by the touch is called by refiners *taking proof*. The method of doing it, is by a pan-stick, of four feet and an half long, eighteen inches of which is made rounding for the grasp of the left hand, and three feet flatwise, about two inches broad, and an inch thick: by immersing this pan-stick into the liquor when boiled to a pretty thick consistence, it will be smeared, upon which the boiler puts his right thumb, taking up a sufficient quantity, and touching then the thumb with the fore-finger, draws the liquid sugar like a thread at the instant when the heat is going off: this thread when broken will shrink from the thumb to the suspended fore-finger, in several lengths as the boiler intends: for the different lengths at which this thread hangs to the fore-finger, determine precisely the different degrees of boiling sugar; and these degrees are proportioned to the several sizes of moulds, or sugar-pots in which it is cured. The denominations by which these degrees are determined by refiners, are, *piece*, *lump*, and *loaf-height*. *Piece-height* is the highest degree, and suited to the moulds of the largest size, which contain about nine gallons: the thread of
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* The art of boiling by the touch has been made a mystery not to be imparted to negroes; but I do aver the contrary from experiment.

piece-height is about three inches long : that of *lump-height*, suitable to moulds of half the former sizes, is when the thread stands at about an inch from the suspended fore-finger : and *loaf-height*, suitable to the smallest moulds, is determined by the thread of a quarter of an inch long from the suspended finger : and this *latter proof* is generally most suitable to the planter's purposes of making muscovado-sugar ; which ought to be of a large grain, well separated from melloffes. It has been said above, that the boiler must take a sufficient quantity of the liquid sugar upon his thumb, to make an exact proof. That sufficiency cannot be expressed in words precisely, but must be just enough to allow the drawing of a thread, and not more ; for that will occasion some deception. In like manner, if the thread is drawn at any other time than at the critical moment when the heat of the liquid sugar goes off the thumb, the boiler will be deceived ; for, if the liquid sugar is either too hot or too cold when drawn into a string, it will vary the appearance. In taking proof, the young learner must expect to blister his thumb, which he will think a small fine for so profitable a purchase : but to give him as little pain as possible, when he takes up the liquid sugar, let him observe to keep his finger and thumb nimbly moving from and to each other in gentle contact, and then draw the string at that instant when the intense heat is going off, by which means he will save his thumb from blistering, and obtain an exact *proof*, according to the rules above prescribed.

The method of boiling muscovado-sugar I have said is below loaf-height *, and if then it is cooled with quickness in a broad superficies, and in a wooden cooler, the sugar will be of a larger grain than if cooled in a deep or copper vessel, as experience evinces. But if the sugar is intended to be cured in pots or earthen moulds, it must be cooled in copper, or deep wooden coolers, that it may be conveyed from thence into the pots, while in the state of a thick liquid. This will occasion the grain of sugar to be *smaller* (and more especially if judiciously stirred while in the cooler) which is an advantage to the color of clayed sugar : for, a multitude of surfaces will reflect more rays of light, and consequently appear *whiter* than larger particles, which have fewer surfaces. For that reason the most expert planters of Barbados generally boil their sugar higher than most other people ; but whether to so much profit, must be determined by future experience : for, if a much less quantity of very white sugar is obtained by boiling high, then, by the contrary method, the question is, whether the greater price is an adequate recompence for so great a loss of weight. In my humble opinion, it is not : however, it is worth the trouble to determine that point by exact weight and measure. In such computations the refined Barbados managers exceed all our Islanders. From one of these I have seen a receipt, in form more exact than that of

* That is the greatest height for rich cane-juice ; but when waterish, it will be high enough, when a thread can be drawn. It is a general maxim that weak cane-juice must be tempered very high and boiled low : the former is absolutely false ; for a due temper must be observed ; to boil it very low, is right, and that is a candy height,

a good house-wife for making a pudding, but by no means equal to it in effect. That celebrated manager prescribes thus: " Take so many pounds of good clay, " and make it into a batter with so much water, and " then put it to so many pounds of sugar, contained in " a pot of so many gallons, &c."

Can any man be the wiser for such a receipt with all appearance of exactness? On the contrary, experience testifies this plain truth, that the quantity and thinness of clay-batter must be exactly proportioned, *not to the quantity of sugar*, so much, as to the degree of height to which it is boiled, which the *face*, or surface of the sugar in each pot must determine: for, if the crust breaks near the center, the sugar is high boiled, and will require a thinner batter; and so *vice versa*, the nearer to the edge of the pot the surface cracks, the thicker must be the clay: for, clay-batter is only the means of filtering the water thro' the sugar by easy degrees, so as to wash the grains from all the yellowness, or tinge of mellosses, without dissolving the smallest particles. In this proportion, therefore, consists chiefly the art of claying, not to sink the pot of sugar by a double clay lower from the brim than five inches, and yet to whiten the whole mass alike to the bottom; but this cannot be effected without great judgment in boiling equally; and in separating the pots into several classes, so as to clay each parcel in a manner suitable to the degree of boiling: for want of this art it is, that a planter may grow poorer by claying his sugar, than if he makes only plain muscovado: for, the loss of sugar dissolved into mellosses by claying injudiciously, cannot be compensated by converting it into rum. He therefore who proposes to

clay sugar to advantage, must first learn the art of boiling by the touch, as the only criterion of boiling to a degree of exactness: he must learn also all the other process of halling and stirring the sugar after it is filled into the pots, by which small errors in boiling may be in some measure rectified. The same skill is requisite to boil sugar which is intended to be cured in pots, *without being clayed*; and therefore that practice is very unprofitable: for, tho' sugar properly boiled will cure best in pots, yet if there be the least error in boiling, it will occasion the sugar to be of a very small grain, as is generally the case of Jamaica-sugar: for, if the same sugar, which is of a small grain, by being put into pots, had been cooled with quickness, in a broad wooden cooler, and cured in hogheads, the grain would have been much larger, as a single experiment will evince. But if, in conformity to old customs, a manager will chuse to cure in pots, let him cool his sugar in a shallow broad cooler, till it becomes very thick, and only liquid enough to be taken up with a ladle, and put into the pots: for, by that means he will have a much larger grained sugar, than by the present practice of putting it hot into pots. It is a common practice to stir hot sugar once or twice after being put into the coolers; which is a sure means of breaking the grain, at the very instant while the sugar is granulating. The reader will pardon the tediousness of this dry description, resulting necessarily from the nature of the subject; and must take the pains to read, as he would undertake any other kind of labor, to promote his interest: for, the Author cannot have his own in view, by communicating to others gratis, what he learned by much labor and expence. Not
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however to grow more tedious by apologies, let us proceed to the fourth point proposed.



SECTION IV.

Of distilling Rum.

THIS art not having self-evident principles for its basis, is founded solely upon experience. The nature of fermentation (which is previously necessary to making rum) can be learned only by practice, and adjusted by exact weight or measure; and even then great disappointments will happen to the distiller; either from imperceptible differences of heat or cold; or from some other latent causes not assignable. All therefore which can be done in this case, is to help the young distiller by a few general rules. As first, and principally to be very cleanly in the whole operation: for, if the mixture, or wash, should become sour by uncleanness, it never will yield a due proportion of spirit. Let the good planter therefore take particular care to cleanse his vessels, whether casks or cisterns, from all sediment every time they are used; and let them be sometimes scalded, to preserve them from all sourness*.

The Barbadians (who think themselves the best distillers in all the sugar-islands) chuse casks for that purpose; but I believe plank-cisterns set above ground

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* Whenever the liquor of a still-house becomes sour, the shortest method is to throw it all away, and then scald the vessels: for, there is not any art yet discovered which can restore it to a capacity of yielding spirit: but roapy liquor may be restored by a large infusion of hot water. If in the course of fermentation the wash grows very hot, cold water must be given to reduce it to a moderate heat.

(as used in England) answer the purpose as well, and are less expensive than iron-bound butts of a conical shape; provided those cisterns have close covers to prevent evaporation. If those critical distillers above-mentioned could be contented with less in quantity, I presume their common rum would have a reputation proportionate to what is called their *fine spirit*: for, upon the whole it is not for the general interest of an island to make rum below the just standard of *good proof*. He therefore is the best distiller who makes most rum of a *due proof*, in * proportion to the quantity of his ingredients.

The next care of a good distiller is to have a large fund of cool, clear, and fine lees: for, if these lees (which are as yeast or barm) be either hot or foul, the fermentation will be sluggish and unprofitable.

The method of preparing fine lees always ready for use, is to have three cisterns of dimensions sufficient to hold three thousand gallons, placed out of doors in frames. Into each of these alternately the hot lees may run by a spout from the stills, and after standing long enough to grow cool and fine, let it be drawn by a cock, clear from all sediment, into a large cistern within doors, to be kept for use. But let it be strictly observed never to reserve lees of sour liquor, which yields no rum: on the contrary, let all such be thrown away as pernicious, and make new lees either by setting

* The boasters in the art of making much more rum than their neighbours, give room to suspect that they defraud the boiling-house; and so by diminishing the quantity of sugar, may easily increase the quantity of rum, which is by no means an equivalent; and therefore all such fraud must be prevented by strict prohibition, and narrow inspection.

ting mellosses with fair water, or scum and water, with or without any addition of mellosses; and when that has fermented properly, so as to yield any proof-rum, the distiller may depend upon these lees as good. Thus original good lees must be made at the beginning of each crop; or at any other time when the liquor becomes sour, and fit only to be thrown away.

The general method of compounding the ingredients for making rum, is in this proportion; which, however, may be varied as occasion requires, with good effect, by a judicious distiller. One third of scum from the cane-juice, one third of water from the washing of the coppers, (which ought to be washed once every twenty-four hours, if the boiler expects to make very good sugar) and one third lees, is, I say, the general proportion now in use. And when these ingredients are put together pretty cool, and well mixed, the fermentation will begin soon, and rise in twenty-four hours to a proper height for admitting the first charge of mellosses. Of this fix gallons for every hundred gallons of wash, is the general proportion to be given at twice: three *per cent.* at the first charge when the liquor is risen to an high fermentation, and the other three *per cent.* † a day afterwards, or a little longer, when the wash is in a high fermentation: for, if the second charge is given *after* the fermentation abates, the liquor will grow sluggish, and never yield a due proportion of rum.

This, I say, is the general method of compounding wash, and adding mellosses at two different times,

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† The time here fixed for the second charge for mellosses, is in compliance with common practice: but a good taste is the best rule.

during the height of fermentation ; and therefore I suffered my distillers to pursue it to my great loss : but now I am convinced by repeated experiments, that by setting the wash and the quantity of melloffes at once, (as is the constant practice both in Old and New England) is the surest and best method of producing rum ; for this method requires no other anxiety or attention of the distiller, but to judge by his feeling of the heat during the progress of the fermentation, and whenever he finds it rising to near blood-heat, immediately to cool it by one, two or three pails of cold water, so as to reduce it to a moderate equable heat : † on the contrary, if the ingredients be set warm, and grow colder, and the fermentation is sluggish, the infusion of hot water will raise, as the cold water abates the fermentation.

This method therefore I recommend, as being the most certain, and requiring the least attention and nicety : whereas, by charging the melloffes at different times, the degree of fermentation must be observed with critical nicety, or the wash is spoiled ; as every planter often finds by the effect, tho' he seldom sees the cause.

When the fermentation falls by easy degrees from the fifth to the seventh or eighth day, so as then to grow fine, and throw up slowly a few clear beads, or air-globules, it is ripe for distillation * : and with these
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† Blood-heat by *Farbenet's* thermometer is at 96 : by a moderate equable heat, I mean the degree of 90, which is about 10 degrees above the medium-heat of the air in this climate.

* Those appearances are suitable only to a very weak wash : but if it be rich, it cannot be fit for distillation, until quite flat and a cream upon it.

air-globules will appear other symptoms discernable by the taste and smell, which cannot be described, and which experience must teach, if the observing planter is not over-nice of his fingers, taste, and smell.

The liquor or wash being duly fermented and fallen, must be conveyed into the still, as fine from the sediment as possible, by cocks, or wooden foffets, placed within two inches of the bottom of each vessel: for if the sediment passes into the still, it will not only give the spirit extracted, a fætid smell and taste, but incrust the bottom of the still, and corrode the copper; to prevent therefore that last ill effect, constant care must be taken to scour often the bottoms of your stills.

In like manner, so soon as the vessels are emptied, and the sediment washed out, let the quantity of fine lees intended for the next setting, be poured in: for otherwise those vessels will in a few hours become sour and unfit for use: but by the lees will be preserved sweet for three or four days, and forward the fermentation of the succeeding wash.

Indeed, much of the profit of distillation depends upon the care of preserving our vessels free from all sourness, and in setting the wash in regular and daily succession during the whole crop: for when the wind blows fresh, and the boiling-house affords scum in abundance, then much of that, and little mellosses, should make the composition. On the contrary, when there is but a scanty product of scum, the quantity of mellosses must be increased; and when at any time there is none at all, mellosses with water, and a large part of lees, must make the composition; from whence

a gallon of rum may be produced for every gallon of mellasses used. By this regularity, it is no difficulty to produce two hogheads of rum for three hogheads of sugar, without mispending time upon grinding rotten canes, which ought to be applied to grinding sound ones for sugar.

The good planter's next concern must be to draw off rum by a constant and equal fire, so as at first not to let his still spew; for preventing of which, it must not be filled higher than within eight or ten inches of the brim; and then, if the still be large, keep an equal fire, sufficient to run a stream of spirit from the worm, nearly as big as a man's little finger; taking particular care to keep the † worm-tub perfectly cool by a constant influx of cold clear water, let into the tub thro' a large square trunk of wood, placed perpendicularly, and the lowest end within six inches of the bottom: there the cold water entering by the bottom of the trunk, may swell the hot water to overflow thro' a lip made at the upper edge of the worm-tub for that purpose: from thence convey it by a spout to an open reservoir out of doors, where it may cool, and be applied again to the same use, in places where water is not plenty: but where the planter is blessed with a little stream of water, it is easy so to contrive channels, as to pass it thro' his boiling-house, and still-house, to the worm-tubs, without pumps, or any other hand-

† A large worm-tub bigger than usual in proportion to the worm, by containing more water will be the cooler; and if the worm be hung eighteen inches from the bottom, it will be farther from sediment. The failure and constant decay of worm-tubs occasions much expence and frequent disappointment: to prevent which, a cistern of 24 feet long, 8 feet deep, and 9 feet wide, will hold 3 large worms for an age.

hand-labor : but if he has not a current to the works, he may by a cheap machine, called a wind-mill-pump, draw all the advantage without hand-labor, if he has plenty of water. This is worth the expence, since nothing conduces so much to improve the quantity and quality of rum, as keeping the † worm-tubs perfectly cool ; for otherwise a great part of the spirit will evaporate, and the rum acquire a burnt disagreeable taste, not wholesome for those who drink it. The worm-tub therefore must be kept perfectly cool, by a constant influx of cold water, which condensing the vapor as it passes thro' the windings of the worm, renders it a spirituous fluid ; and the cooler it passes, the better will be the spirit, and the more of it. With this view to coolness, I presume the general practice here of hanging stills out of doors, took its rise : but I conceive it to be a most egregious error ; for in all other cases *shade* and *wind* cool every kind of liquid much sooner than wind and sun. But if there were really some little advantages of that sort, can they be a counter-balance to the inconvenience of exposing our negroes *unnecessarily* to all the extremities of heat, cold, rain, and wind ? Is this moral rectitude ? And is it not equally inconsistent with every man's real interest to expose his people to all the inclemencies of the weather, subjecting them to the loss of health and life ; his rum to waste in windy weather, and to thefts at all seasons ?

The stream of spirit running from the worm of a still of 500 gallons (I have said) ought to be near as big

† A force-pump is best, because it will throw the water 60 feet high.

big as a man's little finger; because I have learned from repeated experiments, that if that stream is varied to the bigness of a straw by an unequal fire, the spirit will become weak; but raise it again to the former standard, and it will become a proof-spirit; provided the tub be very cool. Whether the best method of distilling low-wines is by returning them into the subsequent still of liquor, or by drawing them off separately, experience must determine. The first method will certainly produce a cooler spirit, more palatable and wholesome; but the latter seems more profitable for the London-market, because the buyers there approve of a fiery spirit which will bear most adulteration; and certain it is, that the oftener a spirit is distilled, the more fiery it will be. This is evidently the ground of preferring Jamaica-rum to all other, not only because it is of a much higher proof, but also more hot, and capable therefore of more adulteration: but it may be doubted whether the Jamaica-planter does not lose more by double distillation and over-proof than he gains by the price at London. If that be a fact, (as experiment may soon determine) it will be for his profit to draw more proof-rum from the wash, and a less quantity of low-wines, as expert distillers do in Barbados: but most certainly the spirit drawn from the wash is more cool, palatable, and wholesome, than that extracted from low-wines, by double distillation. However, not to impose my private opinion upon the candid planter, both methods are proposed, that he may chuse that which is best: and when he arrives at skill enough to produce *two* hundred and forty gallons of good proof-

proof-*rum* for *three* hogsheads of sugar, he will arrive to the highest degree of perfection I ever attained. But this he can never do without the utmost care and regularity : for, he must so contrive to set his cisterns of wash, as to ferment in due time, and become ripe for distillation in regular succession every morning, that his negroes may do the work of the day between sun-rising and sun-setting ; for, nothing is more unprofitable, and dangerous too, than distilling at night. It is true, that such a regular progress requires much care and contrivance, a roomly still-house, and large stills at a great expence : but yet, every good oeconomist will find by experience, that the first charge of a complete well-contrived sugar-work, large enough to take off his crop in due time, without boiling after ten of the clock at night, or distilling after sun-set, will amply recompense all the expence, by the quantity and good quality of his rum and sugar ; as by giving his negroes a due portion of rest, they will continue strong, chearful and vigorous to transact the succeeding labor of the day, with ease to them, and happiness to himself.

Tho' many precepts before suggested, are taken from the English husbandry now in use : yet before I conclude, it is necessary to give the planter a caution, against turning any of his land to pasture, by way of improving it by *rest* ; for tho' this is a right practice in cold countries, it is not so in warm climates. The reason is, because in cold climates the frost operates like wedges, opening the soil, to receive the vegetative powers of the air, and snow, at every thaw of the frost ; and thus is fructified,
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while laid down to grass: but in warm countries, land turned to pasture, is baked by the sun, and trodden by cattle, to a compactness, that will not admit the vegetative powers of the air to enter it. Thus plain reason shews, that the same practice cannot suit different climates; and my own experience confirms that truth, by repeated trials, from one to ten years.

F I N I S.

